

***An exploratory study for the development of Emergency
Nurse Practitioner specialist clinical practice standards***

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Submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy

Faculty of Health, School of Nursing
Queensland University of Technology

2014

Keywords

Advanced nursing practice

Capability

Delphi study

Emergency department

Emergency nurse practitioner

Interpretive research

Mixed methods research

Nurse practitioner

Practice standards

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Abstract

The nurse practitioner role in Australia has shown positive outcomes in service delivery and patient care where the role has been implemented. This has been demonstrated for emergency nurse practitioner service, where previous research has shown the effectiveness of the role, particularly with low-acuity patient presentations to emergency departments. Nurse practitioners in Australia have been guided in their practice by the National Nurse Practitioner Competency Standards, which were recently updated and renamed as the Nurse Practitioner Standards for Practice. These standards are generic in nature and thus do not address the specialty practice needs of nurse practitioners.

The aim of this research was to explore the practice parameters of emergency nurse practitioners across Australia and to develop specialty practice standards for their clinical domain to provide an evidence-based practice and educational framework. This study has produced new knowledge on the practice parameters of emergency nurse practitioners. The developed practice standards for emergency nurse practitioners from this research are the first specialist clinical practice standards for nurse practitioners in Australia. The findings also have the potential to clarify the emergency nurse practitioner role and guide further role development.

The research was conducted using a mixed-methods exploratory design. The intent of the design was that the collection and analysis of qualitative data would assist in developing an instrument to collect quantitative data, and that the results would generalise from, or expand on, the initial qualitative data. The sequential phases in this study were structured into *consultation* phase one and *consensus* phase two. Phase one consisted of individual interviews with a random sample of 20 emergency nurse practitioners, and the interpretation of these qualitative data produced the practice framework described as 'Modes of Practice'. This framework provided the structure and content for the construction of a draft instrument for the consensus phase. Phase two was a two-round Delphi study, and the analysis of these quantitative data enabled the refinement of the draft instrument to become the

‘Emergency Nurse Practitioner Specialty Clinical Practice Standards’. These standards were validated by consensus from the emergency nurse practitioner participants. Along with the ‘Modes of Practice’ framework, these standards constituted the main findings of this study.

List of Publications and Presentations

O'Connell J & Gardner G (2012). Development of clinical competencies for emergency nurse practitioners: A pilot study. *Australasian Emergency Nursing Journal* 15(4), 195–201.

O'Connell J, Gardner G & Coyer F (2014). Profiling emergency nurse practitioner service—An interpretive study. *Advanced Emergency Nursing Journal*. Accepted for publication.

O'Connell J, Gardner G & Coyer F (2014). Beyond competencies: Using a capability framework in developing practice standards for advanced practice nursing. *Journal of Advanced Nursing*. Accepted for publication.

O'Connell J, Gardner G & Coyer F (2013). A National Delphi Study to develop and validate emergency nurse practitioner practice standards. Under review.

Conference Presentations

O'Connell J (2012). Developing emergency nurse practitioner competencies for the Australian context. *7th ICN International Nurse Practitioner/Advanced Practice Nursing Network Conference*, London, August. Concurrent presentation.

O'Connell J (2012). Developing emergency nurse practitioner competencies. *Australian College of Nurse Practitioners 7th Annual Conference*, Gold Coast, September. Concurrent presentation.

O'Connell J (2013). Developing emergency nurse practitioner competencies for the Australian context. *ED NURSPRAC 4th Australian Emergency Nurse Practitioner Conference*, Melbourne. Keynote presentation.

O'Connell J (2014). *ED NURSPRAC, 5th Australian Emergency Nurse Practitioner Conference*, Sydney, May. Invited speaker.

O'Connell J (2014). Developing emergency nurse practitioner clinical practice standards. *8th ICN International Nurse Practitioner/Advanced Practice Nursing Network Conference*, Helsinki, August. Accepted oral presentation.

O'Connell J (2014). The Donna Diers (inaugural) Lecture. *Australian College of Nurse Practitioners 9th Annual Conference*, Sydney, September. Invited speaker.

O'Connell J (2014). Developing emergency nurse practitioner clinical practice standards. *1st World Congress on Emergency Nursing and Trauma Care*, Dublin, September. Accepted poster presentation.

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signed	QUT Verified Signature
Date	21/06/2014

Acknowledgments

This thesis would not have been possible without the expert, supportive and collegial supervision provided by my principal Supervisor Professor Glenn Gardner. She has guided this body of work in the most professional manner, incorporating much flexibility along the way. I owe her my perpetual gratitude for bringing me this far. It has been an amazing experience to have Glenn as my supervisor, and I consider it an honour and a privilege to have been one of her doctoral students.

My Associate Supervisor, Associate Professor Fiona Coyer, has provided critical academic input into the development of the publications. This has been invaluable and I thank her for her involvement.

My family has watched and participated in this doctoral journey for many years. My husband has been my main support and has often had to deal with my self-doubts and frustrations. He has been unfailing in his encouragement; without him, I would not have endured despite superb academic supervision. My children, who often ponder the notion of higher education but who are all highly intelligent, have also endured this journey. This is for you to see that it is possible to finish a higher educational degree.

Thank you to the community of emergency nurse practitioners in Australia and overseas who have been so interested in my research and supportive of its possibilities. A particular thank you to the emergency nurse practitioners who participated in the research and gave me such rich data and constant encouragement, and also to my fellow emergency nurse practitioners—this work is for you to take and utilise for your continuing development.

Numerous other people have contributed to my persistence during this study—other nurse practitioners, academics and medical colleagues in particular—but to all of those who have supported me, you have contributed in no small way to my vision and its realisation.

This thesis was edited by Elite Editing, and editorial intervention was restricted to Standards D and E of the *Australian Standards for Editing Practice*.

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List of Abbreviations

AANP	American Association of Nurse Practitioners
ACNP	Australian College of Nurse Practitioners
AIHW	Australian Institute of Health and Welfare
ANCC	American Nurses Credentialing Centre
ANMC	Australian Nursing and Midwifery Council
ANMAC	Australian Nursing and Midwifery Accreditation Council
ATS	Australasian Triage Scale
CENA	College of Emergency Nursing Australasia
CIHI	Canadian Institute for Health Information
CNA	Canadian Nurses Association
COAG	Council of Australian Governments
CNPI	Canadian Nurse Practitioner Initiative
ECS	Emergency Care Settings
ED	Emergency Department
ENP	Emergency Nurse Practitioner
ENA	Emergency Nurse Association (USA)
GDP	Gross Domestic Product
HWA	Health Workforce Australia
MDT	Multi-Disciplinary Team
NCNZ	Nursing Council of New Zealand
NMBA	Nursing and Midwifery Board of Australia
NMC	Nursing and Midwifery Council (UK)
NP	Nurse Practitioner
RCN	Royal College of Nursing (UK)

Chapter 1: Introduction

Context of Healthcare in Australia

The Australian healthcare sector is undergoing reform, with the National Health Reform Agreement of 2011 implementing major changes in the system. The establishment of ‘Medicare Locals’, which commenced on 1 July 2012, was anticipated to improve the organisation of primary care nationally (Council of Australian Governments (COAG), 2011^a). ‘Medicare Locals’ are the general practitioner (GP) and primary healthcare partners of ‘local hospital networks’, and they are responsible for supporting and enabling better-integrated and responsive primary healthcare services to meet the needs of the community (COAG, 2011^a). In a move to decentralise public hospital management, local hospital networks became the governance structure for public hospitals in Australia from 1 July 2012 (COAG, 2011^b). It was felt that it would lead to an increase in local accountability by driving improvements in performance and by having the flexibility to shape service delivery according to local needs (COAG, 2011^b).

Australia’s population is growing, ageing and living longer, with life expectancy at birth remaining among the highest in the world—almost 84 years for females and 79 years for males (Australian Institute of Health and Welfare (AIHW), 2010). Health expenditure in Australia was estimated to be \$140.2 billion in 2011–2012, which was 9.5 per cent of gross domestic product (GDP) (AIHW, 2013^a). Under the 2011 National Health Reform Agreement, the commonwealth government is providing an extra \$16.4 billion through to 2019–2020 for public hospitals. The issue of providing appropriate healthcare to an ageing and growing population is not unique to Australia. The provision of health services is labour-intensive and the current and future lack of appropriately skilled health professionals has a negative effect on timely access to, and quality of, care; this is a global concern (Organisation for Economic Co-operation and Development (OECD), 2011).

With major healthcare reform in Australia, there is an expectation that many current problems will be solved or alleviated. Emergency departments (EDs) have had to contend with whole-system problems, which have manifested as overcrowding and ‘access block’. Access block refers to the delayed transfer of admitted patients out of the ED due to a lack of availability of inpatient beds (Paoloni & Fowler, 2008). This can result in ED overcrowding, where the ED’s function is impeded by the number of patients who are waiting to be seen, undergoing assessment or treatment, or waiting for departure, thus affecting the capacity of the ED to function efficiently (Forero et al., 2010).

Presentations to Australian EDs rose by an average of 4.0 per cent each year between 2008–2009 and 2012–2013. There were more than 6.7 million presentations reported by public hospital EDs in 2012–13 (AIHW, 2013^b), and bed occupancy rates in most hospitals exceeded 85 per cent (Forero et al., 2010). A variety of reasons can explain increased attendances at EDs and decreased access to inpatient beds. For example, there has been an increase in ‘non-urgent’ presentations to EDs due to a lack of availability of primary healthcare services or other models of care (Jennings et al., 2008; Considine et al., 2006^a).

With the plethora of issues affecting the performance of EDs and the provision of quality care, another reform is having a significant effect on the performance of public hospital EDs. In January 2012, a ‘National Emergency Access Target’ (NEAT) of four hours was introduced. The objective of this target is that 90 per cent of all patients presenting to a public hospital ED will either physically leave the ED for admission to a hospital bed, be referred to another hospital for treatment or be discharged within four hours (COAG, 2011). Prior to the introduction of the ‘four-hour rule’, access block was described as the total time in the ED from arrival to departure exceeding eight hours (Paoloni & Fowler, 2008). One consequence of this target for the efficient and safe running of EDs is the need for further health workforce reform and more creative resource management.

Developing new models of care and better managing existing resources are strategies that have been adopted to improve ED overcrowding. One such innovation has been the development of the role of the emergency nurse practitioner (ENP) specifically to

address waiting times and non-urgent presentations (Christofis, 2001; Considine et al., 2006^a; Jennings et al., 2008; Lowe, 2010).

Evolution and Education of Nurse Practitioners

Nurse practitioners (NPs) were formally introduced into the Australian health workforce with legislated title protection in 2000 (Harvey, 2011). Over the past 14 years, NPs have become well established, and there are now more than 1,000 endorsed NPs in Australia (Nursing and Midwifery Board of Australia (NMBA), 2014^a).

According to the NMBA: ‘A nurse practitioner is an advanced practice nurse endorsed by the Nursing and Midwifery Board of Australia to practise within their scope under the legislatively protected title ‘nurse practitioner’ (NMBA, 2011^b, p. 5).

The NMBA’s definition of advanced practice nursing for NPs is:

Advanced practice nursing as a nurse practitioner is a qualitatively different level of advanced nursing practice to that of the registered nurse due to the additional legislative functions and the regulatory requirements. The requirements include a prescribed educational level, a specified advanced nursing practice experience; and continuing professional development (NMBA, 2011^b, p. 5).

In Australia, endorsement as a NP requires the completion of an accredited NP master’s program (NMBA, 2011^a). For applicants who have not completed an approved NP master’s degree, there is a requirement to prove the education equivalence in knowledge and skills (NMBA, 2011^a). Currently in Australia, there are 19 approved NP masters programs with generic content for the preparation of NPs. A small number have a specific focus within the course content (e.g., mental health or remote practice) (NMBA, 2014^b). Approved masters programs use generic NP competency standards to guide curricula development and course content (Australian Nursing and Midwifery Council (ANMC), 2009). In Australia, potential NP masters students are required to demonstrate that they have a minimum of five

years full-time equivalent experience as a registered nurse (RN)—with three years within their chosen specialty and one of those full-time years working at the advanced practice level—in order to be accepted into a master's program (ANMC, 2009).

The Australian Nursing and Midwifery Accreditation Council (ANMAC) is responsible for accrediting education providers and programs of study for the nursing and midwifery profession. It governs the educational courses conducted within Australia that lead to the 'registration, enrolment, endorsement and authorisation' of nurses and midwives. Australian masters courses are designed to academically prepare experienced RNs for the extended and advanced practice role of the NP (ANMC, 2009). The courses recognise that students have already achieved a level of expertise within their clinical specialty prior to undertaking the program. Clinical learning is a core component of Australian masters programs, and it is achieved through specific and advanced clinical practice in the student's area of clinical expertise. Masters courses incorporate 'Professional Experience Placement' to prepare NP students for entry into practice; this requirement for Professional Experience Placement is stipulated in the ANMC's (2009) standards, which guide curriculum development for NP masters courses. However, students also consider it a necessary component of sound NP education (Gardner et al., 2006). Nurse practitioner students support and understand the need for 'significant clinical learning experience' during their preparation for the NP role (Gardner et al., 2009). The national document, 'ANMC Nurse Practitioners: Standards and Criteria for the Accreditation of Nursing and Midwifery Courses Leading to Registration, Enrolment, Endorsement and Authorisation in Australia' (ANMC, 2009) states that 'The course provider is required to demonstrate: Assessment in the professional experience context to establish the combination of skills, knowledge, attitudes, values and abilities that underpin competent and capable performance' (p. 18).

Currently, the clinical teaching of NP students is conducted by on-site clinical support teams, which are frequently headed by a medical specialist in the field. The content of clinical education usually focuses on the local expectations of the role rather than an agreed standard for each specialty.

The Emergency Nurse Practitioner (ENP) role has been implemented in Australia at a variety of sites, including major metropolitan hospitals, regional hospitals and centres, and rural and remote sites, with varying degrees of success (Considine et al., 2006^b; Christofis, 2001). This fluctuation in success can be attributed to variables of the institutions and clinical sites. Sites where the role has flourished have had good support from other staff, particularly medical staff (Haines & Critchley, 2009).

The development of the ENP role across Australia has been guided by the notion that ENPs manage less acute presentations, minor injuries and illnesses—usually patients in the Australasian Triage Scale (ATS) categories 4 and 5 (Christofis, 2001; Considine et al., 2006; Jennings et al., 2008; Lowe, 2010). The ATS is utilised in hospital-based emergency services to prioritise presenting patients according to clinical urgency (ACEM, 2013). It is a five-point rating scale, with category 1 being immediate for resuscitation, through to category 5 for non-urgent presentations (CENA, 2012). Timely management of low-acuity category 4 and 5 patients has been an impetus for the adoption of the ENP role, as well as minimising the number of patients leaving without being treated (Christofis, 2001; Considine et al., 2006^a; Jennings et al., 2008).

While using the ENP to achieve targets for these service needs has been effective (Considine et al., 2006^a), there are problems with the deployment of the most experienced and highly educated emergency nurses for low-acuity care rather than the utilisation of their clinical expertise for the sickest and more complicated patient presentations (Haines & Critchley, 2009; Lowe, 2010). There is a need to conduct research into the practice parameters of ENPs to determine if the fast-track, minor-injuries model is the dominant model in Australia and, if it is not, what other functions ENPs perform. By researching and uncovering the current practice of ENPs nationally, the establishment of specialty practice standards will be facilitated.

In the absence of specialty competencies/practice standards or a recognised skill set for ENPs, the role continues to develop in a disorganised manner to suit individual and local needs in EDs. The development of specialty practice standards for ENPs will guide educational needs for clinical components (e.g., Professional Experience Placement) of masters degrees, provide a framework for the ongoing professional

development of ENPs and established roles, and provide clarity about the broad potential for the ENP role.

In November 2013, the NMBA released an updated version of the generic Nurse Practitioner Competency Standards (NMBA, 2013^a). The updated document is called 'Nurse practitioner standards for practice'. This thesis commenced using the descriptor of 'competency standards' and, as the research developed, it progressed to the descriptor 'practice standards' or 'standards for practice'.

Research Aim

The aim of this research was to investigate the parameters of practice for ENPs and to develop and validate national specialty clinical competency/practice standards for ENPs.

Research has shown that the implementation and ongoing development of ENPs in Australia has been of benefit to the healthcare community (Wilson et al., 2009), but it is also anecdotally fraught with difficulties in implementation and progression due to influences outside the nursing profession. Local beliefs and assumptions about service delivery requirements have affected the development of the role, and individual roles have been implemented without professional consensus on specialty education, a practice framework or the development of the ENP role. The adoption of the minor-injury role for ENPs occurred because many sites adopted what other institutions had done, often due to individual EDs improving their Key Performance Indicators (KPIs), but also believing that this was the only role for ENPs (Haines & Critchley, 2009). The current generic practice standards for NPs that guide education and role performance have been beneficial, and non-clinical attributes such as 'leadership' and 'research' continue to guide the NP role. Nonetheless, in view of the growth in numbers and disparity in the implementation of the ENP role, the practice parameters of the ENP require investigation in order to facilitate the development of specialty clinical practice standards for the ENP role.

In the absence of specialty competencies/practice standards for ENPs in Australia, there is no benchmark to ensure that standardised theoretical and clinical specialty content has been incorporated into educational preparation prior to NP endorsement. The development of ENP specialty clinical competencies/practice standards will support a better understanding of the potential breadth of the ENP role and therefore health service planning, and it will assist in the individual professional development and ongoing evaluation of the practice standards of the ENP.

Therefore, the aim of this research is to develop specialty clinical practice standards for ENPs and contribute to international knowledge development regarding the practice parameters of ENPs.

Research Questions

The research questions guiding this study were:

1. What are the parameters of practice for ENPs?
2. What are the extended-practice clinical and professional skills and attributes of ENP practice?
3. How can competency standards designate advanced practice and differentiate the attributes from entry-level practice?

This thesis is a corpus of original work developed and presented in four publications. Each publication informs subsequent work and is also a discrete contribution of knowledge to the field. The thesis presents the rationale and approach to achieve the research aim.

Chapter Two presents a systematic examination of documents and research literature related to the topic of competencies and NP competency development, focusing on the research literature related to ENP competency development.

Chapter Three is a published article that describes the pilot study conducted in late 2011 and early 2012 to test the feasibility of the data collection methods and research

processes for the larger national study. The article was also developed to communicate the emerging and subsequent research activity to the discipline.

Chapter Four describes the overall research design, including an introduction to the theoretical framework of capability that guided the study.

Chapter Five is a journal article (accepted for publication) that explicates the Theoretical Framework of Capability. This framework conceptualises the research for enquiry into educational standards for the preparation and assessment of advanced practice.

Chapter Six is a manuscript (accepted for publication) that describes the first phase of the national study; that is, individual interviews with a random sample of 20 ENPs across Australia. The aim of this phase of the research was to investigate ENP practice parameters in order to provide a knowledge base for the development of specialty practice standards.

Chapter Seven is a manuscript (under review) for publication that describes the two-round national Delphi study. The Delphi instrument comprised draft ENP practice standards that were developed from the findings of the interpretive study described above. The Delphi study was conducted in order to refine and validate the specialty practice standards for ENPs.

Chapter Eight discusses the overall findings of the research and connects the individual parts of the research study to present an interrelated body of work. This chapter also includes the conclusion, which makes recommendations based on the findings of the research.

During the course of this research, the generic 'Competency Standards for Nurse Practitioners' (ANMC, 2006) in Australia were updated and are now called the 'Nurse practitioner standards for practice' (NMBA, 2013^a). This change explains any perceived inconsistency in the text.

Chapter 2: Literature Review

Introduction

As the population of Australia grows and lives longer, many with chronic disease and multiple comorbidities (Health Workforce Australia (HWA), 2011), so is health expenditure rising. In 2011–2012, health expenditure was estimated to be \$140.2 billion, which was 9.5 per cent of GDP (AIHW, 2013^a). Health expenditure in Australia increased from \$10.8 billion in 1981–1982 to \$112.8 billion in 2008–2009 (AIHW, 2010). With increasing costs, growing demand and rising expectations for access to health services, complicated by the changing burden of disease and an ageing population, the Australian health workforce faces considerable challenges in providing sustainable quality health services (HWA, 2012).

Workforce planning requires matching community needs with an effective workforce to provide healthcare needs (HWA, 2011), and health workforce reform is an ongoing project (Bryant-Lukosius et al., 2004). Changing demands for healthcare is a driver for government, professional bodies and clinical managers to resourcefully reform the workforce to improve productivity, provide more effective support and provide accessible health services to meet the health needs of the population (HWA, 2011).

A health service and workforce innovation that has been gaining increasing attention in recent years is the NP role. NPs are being introduced in response to the changing healthcare system, where economic conditions and fluctuations in the supply and demand of other healthcare providers influence the development and acceptability of the role (Bryant-Lukosius et al., 2004). NPs were instigated in the United States (US) in the 1960s to address a deficit in primary care in the community setting (Gardner et al., 2007). Since then, the NP service has developed globally, and these clinicians work in a variety of specialties and healthcare contexts across urban and rural settings (Gardner et al., 2007).

Several attempts have been made to map the development of the NP role globally (Currie et al., 2007; Pulcini et al., 2010; Sheer & Wong, 2008). However, several factors influence the accuracy of such a mapping exercise. There is a lack of consistency in nomenclature internationally, and in many countries, the NP role is not differentiated from other advanced-practice nursing roles. In addition, a few countries have no legislated title protection for NPs, so the role differs across borders. Finally, in many developing countries, NPs are central to the delivery of healthcare, but there is scant documentation of the role. However, a core group of countries has been recognised where NP development is documented, educated for, researched and, in many instances, regulated.

International Nurse Practitioner Development

Nurse Practitioners in the United States

In the US, the role was first developed to provide primary care to a paediatric population at a time when there was a lack of adequate numbers of primary-care physicians (Silver, Ford & Steady, 1967; WorkingNurse, 2012). Loretta Ford and her medical colleague Henry Silver developed an educational program to prepare nurses to expand their role to provide comprehensive care to children, including identifying and managing acute and chronic conditions, and evaluating and managing emergency situations until medical assistance was available (Silver, Ford & Steady, 1967). The nurses who graduated from the first educational program were identified as Paediatric NPs (HWS, 2012). The certificate program conducted at the University of Colorado later became a master's degree (WorkingNurse, 2012).

The entry requirements for NP post-graduate courses in the US are different to Australia. Many US documents discuss the need for 'internships' for beginning NPs, and some of these programs are conducted following specific post-graduate academic NP educational courses (Hart & Macnee, 2007; Segal-Isaacson, 1999; Bahouth & Esposito-Herr, 2009). These internship programs were developed to cater for graduating NPs—some of whom had not worked clinically as RNs prior to their NP educational course or within their chosen specialty prior to achieving NP status (Campo et al., 2008).

In November 2013, there were more than 171,000 NPs practicing in the US (American Academy of Nurse Practitioners (AANP), 2013^a). The size of the NP workforce attests to the recognition of this role in the ongoing healthcare reform process in the US (AANP, 2010¹), and it continues to build on the foundation of the NP role introduced in 1965 in Colorado (AANP, 2010²). There are currently more than 350 institutions that provide graduate, advanced education for NPs—with most at the masters' level and more than 45 at the doctoral level (AANP, 2013^b).

NPs in the US are licensed, independent clinicians who practice in a variety of settings across primary, secondary and tertiary contexts, as well as across a variety of specialties including, but not limited to, adult health, paediatric health, mental health, women's health, gerontology and oncology (AANP, 2010²). NPs also practice in sub-specialty areas such as emergency, cardiovascular, endocrinology and haematology (AANP, 2010²). NPs in the US are licensed by the state licensing boards because there is no national regulatory system (AANP, 2010³ ; WorkingNurse, 2012); however, 97 per cent are nationally certified in their clinical specialty area (AANP, 2010³; AANP, 2011). As defined by the National Consensus Model for Advanced Practice Registered Nurse Regulation (2008), the categories for NP certification include a range of models that address population categories rather than specialty areas of practice. These are: family NPs, adult NPs (including acute care), women's health NPs, paediatric NPs, neonatal NPs and psychiatric/mental health NPs (ANCC, 2012). The National Council of State Boards of Nursing (2008) states that concurrent specialty education can occur with other post-graduate education that is required for licensure, but that competence at the specialty level is not assessed or regulated by boards of nursing; it is within the remit of professional nursing organisations. However, in 2013, the categories for certification as a NP were modified to reflect the progress of the practice specialties and settings of NPs. The Adult Gerontology Primary Care certification was introduced (AANP, 2013^b), as was the ENP Certification (ENP-C), through the American Nurse Credentialing Centre (ANCC) (Hoyt et al., 2013), recognising NP emergency care as a specialty for the first time.

In 1979, Ford predicted that NPs would become the nurse for all settings (HWS, 2012). More recently, she was quoted as saying that 'Nurse Practitioners have

become embedded in every aspect of healthcare and have transformed the profession' (WorkingNurse, 2012).

Nurse Practitioners in Canada

The Canadian NP movement began in 1967 with the introduction of the first education program for NPs in Nova Scotia, which was aimed at RNs who worked in primary care in remote stations (Health Canada, 2007). Education prepared them to take on an expanded role in their practice settings, with the major stimuli being physician shortages and the changing role of nurses (Canadian Institute for Health Information (CIHI), 2006). By the 1970s, there were several approved education programs for NPs in Canada; however, progress stalled because there was no regulation or legislation to support the role (CIHI, 2006). By the 1980s, most of the initiatives underway in the Canadian health system to develop the NP role had disappeared, despite several reports that supported the development of the expanded role for RNs in primary care (Health Canada, 2007). Apparent reasons for this decline were a lack of support from medicine and nursing, a lack of funding, a lack of public awareness, the absence of legislative support and an oversupply of physicians (Worster et al., 2005; CIHI, 2006). Despite this situation, approximately 250 NPs continued to work through the 1980s and 1990s in Ontario, primarily in community care and remote nursing stations (Worster et al., 2005).

The health reforms for primary care in 2004 provided \$8.9 million to the Canadian Nurse Practitioner Initiative (CNPI) to develop a Canada-wide framework to support the sustained integration of the NP role into the Canadian healthcare system (Canadian Nurses Association (CNA), 2009). The CNPI released the Canadian Nurse Practitioner Core Competencies in 2005 (CNA, 2009). These were adopted by regulatory bodies to mandate the initial and continuing competence of Canadian NPs (CNA, 2011). Every Canadian provincial and territorial government now has NP legislation in place (CNA, 2011). In July 2006, the CNPI published a report containing 13 recommendations to integrate NPs into the health system (CNPI, 2006). This led to seven strategic areas being addressed, including legislation and regulation. As of 2011, there were more than 3,000 NPs in practice across Canada; they are considered an integral part of the healthcare system and work in a variety of

healthcare settings, with an emphasis on primary healthcare (CNA, 2011). The CNA has recognised that the practice of NPs will continue to evolve as healthcare environments and practice contexts change (CNA, 2005).

Nurse Practitioners in the United Kingdom

The first NP program run by the Royal College of Nursing (RCN) was available in 1992 (RCN, 2012). The main focus of the early development of NPs in the United Kingdom (UK) was primary-care settings and working with the underprivileged (RCN, 2012), similar to its origins in the US and Canada (CIHI, 2006; AANP, 2010). By 1996, the RCN Council had defined NP practice and agreed on appropriate educational preparation for the role (RCN, 2012). The term ‘advanced nurse practitioner’ is increasingly being used in the UK, and the RCN has implemented this title (RCN, 2012) to differentiate from the title ‘NP’, which has been adopted by many who are not prepared educationally or who have inadequate experience for the role.

The RCN is responsible for the accreditation of NP programs provided by higher-education institutions, and it recommends that a specific course—to at least honours degree level—should be undertaken by would-be NPs (RCN, 2012) participation in the accreditation program is at the discretion of the higher education institution. The RCN has accredited more than 20 advanced nursing practice programs for NPs—mostly at the award level of BSc (Hons) up to the masters level (AANPE, 2012). However, there are many more advanced nursing practice educational courses across the UK that are non-award programs and not accredited by the RCN (AANPE, 2012). In 2002, the RCN published ‘Domains and competences for UK nurse practitioner practice’ (RCN, 2012), which formed the basis for advising core generic competences required for new and existing NP roles to ensure safe and effective practice and the appraised curricula development of RCN-accredited educational programs across the UK (RCN, 2012). In 2010, the RCN published ‘Advanced Nurse Practitioner—an RCN guide to the advanced nurse practitioner role, competencies and programme accreditation’, which was designed as a manual to bring together the definition of advanced NP roles, the amended domains and competencies for advanced NPs in the UK, and the standards that higher educational institutes must meet for their educational programs to receive RCN accreditation. Two of the

strategic events that led to this document and the revision of previous documents were an escalating debate on the nature of advanced nursing practice and the appropriate academic level, as well as the Nursing and Midwifery Council's (NMC's) movement to develop a regulatory framework for advanced NPs (RCN, 2012).

There has been ongoing discussion within the UK regarding the regulation of advanced practice roles such as NPs, as there is no regulatory framework (NMC, 2010). This is problematic when nurses use the title 'NP' or 'advanced NP' without having completed appropriate further education to prepare them as safe, competent and efficient clinicians at an advanced level of practice (RCN, 2012). Further, there is no agreed level of regulation for the ongoing use of the advanced NP title (RCN, 2012).

The NMC has been collaborating with the government since 2006 on how to amend the Nurses Register with a sub-part of the register for advanced NPs (NMC, 2010). The NMC is responsible for registering all nurses and midwives in the UK; however, many of the NP initiatives are unique to individual countries within the UK, and many documents on the progress of the NP role, competence and education pertain to individual jurisdictions (Prime Ministers Commission, 2010; NMC, 2010; RCN, 2012). This has resulted in government bodies becoming increasingly vocal regarding the regulation of advanced NPs, with Recommendation 8 from a report commissioned by the Prime Minister's Office (2010) stating that 'The Nursing and Midwifery Council must regulate advanced nursing practice, ensuring that advanced practitioners are recorded as such on the register and have the required competencies' (p. 101).

Despite this, the NMC project group continues to work with the government and professional nursing organisations to develop a regulatory framework for advanced NPs to safeguard the public and attest that the standards of practice are adhered to by certifying NPs as competent and educationally appropriately prepared (NMC, 2010).

Nurse Practitioners in New Zealand

In 2000, the Nursing Council of New Zealand (NCNZ) declared that it would formally endorse the NP role and protect the title in legislation (NPAC-NZ, 2006). The first NP was announced in 2001 (Waikato District Health Board, 2008), and there are currently nine approved university programs in the country that deliver the clinical masters degree for NP education. NPs in New Zealand (NZ) are endorsed within a specific scope of practice that is identified on their annual practicing certificate (NCNZ, 2013). However, NZ has separated prescribing from the scope of practice, and those NPs wishing to prescribe within their specific area of practice are required to successfully complete an approved prescribing component of the clinically focused masters program approved by the NCNZ (2012). In 2012, there were 89 NPs in NZ, with the strongest growth in primary healthcare (NCNZ, 2011). At the end of 2013, six of the registered NPs in NZ were in the specialty of emergency nursing (Geraghty, 2013).

Nurse Practitioners in Australia

The formal development of the NP role in Australia was stimulated by the New South Wales Health NP Pilot Project in 1994–1995 (Currie et al., 2007). This was the first official project to address the NP role and its feasibility within the Australian health context (NSW Health, 1995). Following positive findings from this research, all states in Australia developed their own models and legislative arrangements for NPs in acknowledgment of the future potential of the role to enhance healthcare in Australia (Duffield et al., 2009). The first NPs in Australia were authorised in NSW in 2000 (Cashin et al., 2007), and the first position was appointed in 2001 in a rural setting in NSW (Harvey, 2011). As of December 2013, data from the NMBA show that there are more than 1,000 endorsed NPs in Australia (NMBA, 2014^a).

The role of the NP in Australia is regulated, and the title is protected by legislation. Each state had separate laws governing NPs until 2010 when, under the Health Practitioner Regulation National Law Act, the NMBA became the only national regulating authority for nurses, midwives and NPs (NMBA, 2010). The NMBA utilises the generic NP competency standards adopted by the ANMC in 2006 to

assess NP students on their suitability for endorsement as a NP. These competency standards are used by the NMBA to assess ongoing competence in NPs, and to convey to the public the standard they can expect from a NP (ANMC, 2006). They are also used to inform university curricula development (ANMC, 2006) and course accreditation (ANMC, 2009). The generic NP standards that describe practice were developed from a study by a trans-Tasman team of investigators (Gardner et al., 2004) that studied the NP role across Australia and New Zealand. Three standards were developed from the research: Standard 1: Dynamic Practice; Standard 2: Professional Efficacy; and Standard 3: Clinical Leadership (ANMC, 2006). Each standard has a number of competencies, and each competency is qualified by performance indicators. The research and development of the generic competency standards for a NP were considered important developments in explicating the level of knowledge and expertise expected of this group of senior nurses (Gardner et al., 2004). These generic NP competency standards have recently been updated and are now called the 'Nurse practitioner standards for practice' (NMBA, 2013^a); however, they remain generic in nature.

Competencies in Nursing

Competencies are widely used in Australian vocational training; they were enthusiastically adopted by this education sector in the early 1990s. Competencies were considered a useful tool for designing measurable industry standards of work practices (Keating, 1994). Around this time, competencies were adopted in nursing (Sutton & Arbon, 1994) and were quickly implemented as benchmarks for nursing undergraduate education and regulation through the (then) Australian Nursing Council competencies. Competency standards are now widespread in nursing; they are used by nurses to measure their own competence, by nurse regulatory authorities to determine suitability for licensure, by education providers to inform course curricula and by employers for position description development and performance assessment (ANMC, 2006). Competency standards are agreed professional standards that are claimed to be measurable and that allow student behaviour to be observed and assessed while performing specific workplace tasks and roles (Cairns, 2000). It has been argued that competency standards are a constructive advancement that give

nursing professional status and enable nurses to identify their areas of practice (Chiarella et al., 2008).

However, these claims are contested, and competence is also considered an ambiguous notion that is perceived by assorted groups in numerous ways (Gardner et al., 2007). Some have suggested that competence is a nebulous concept that is defined in different ways by different people (Watson et al., 2002), and others are clear that competency standards are a necessary balance against an over-intellectual approach to education and practice in nursing (Eraut, 1998). A finding from a systematic review of clinical competency standards (Giot, 2000) indicated agreement on the need to assess clinical nursing competence but cautioned that achieving the reliability and validity of the assessment of competency has not yet been addressed in the literature.

Competencies are deemed by many as necessary, but they represent a degree of simplicity, as they tend to be prescriptive and are designed for a stable environment with familiar problems (Phelps et al., 2005). They are most often designed for entry level to practice for undergraduate or new graduate nurses, and they are usually broadly defined and open to interpretation depending upon the assessment context or model (EdCaN, 2008). There is also some concern in nursing that the use of the term 'competency' is associated with the Vocational Educational and Training sector (Chiarella et al., 2008) and therefore used in jobs where a high level of intelligence is not needed (Watson et al., 2002). Competency testing is viewed as being specific to manual jobs, where sets of skills that are specific to the job can be measured, rather than applying rigorous academic testing (Watson et al., 2002).

Despite the lack of consensus on the relevance of competencies for nursing, the use of clinical competency assessments has become central to nursing education. In some programs in recent years, the move towards clinical skill development in nursing assessment has received greater emphasis than academic competence (Watson et al., 2002). With the widespread use of competencies and competency-based assessment in nursing, it is impractical to suggest that they are not suitable for the assessment of advanced-level nurses, but they need to reflect the complexity of advanced practice.

Other health professions struggle with the use of competencies and competency assessment of practice for post-graduates students and experienced practitioners. Ebrall (2007) argued that the competencies developed in Australia for chiropractic education are weak and represent the minimum standards required for entry-level qualifications. He further argued that graduates require something more than ‘blunt tools’ and that graduate capabilities should be adopted to represent the practitioner/patient interaction in the context of individualised care. Medical educationalists have struggled with similar issues for many years, with contemporary thinking that competency assessment for graduates and expert doctors are not reflective of the complex nature of the individual patient’s episode of care (Durning et al., 2013). The ‘context specificity’ of any patient interaction with experienced practitioners pertains to the unique nature of the patient episode of care beyond the summative process that signifies the bulk of skill training for undergraduate students (Dijksterhuis et al., 2013; Durning et al., 2013). Context specificity refers to clinical reasoning—both diagnostic and therapeutic reasoning—applied on a case-by-case situational basis to enable ‘wise’ actions by selecting the best choices for treatment in a specific situation or context (Durning et al., 2011). Eraut (1998) described this as ‘situated knowledge’—that is, expertise and knowledge acquired over time through experience in the performance of a profession that enables the practitioner to interact with patients at a particular time and determine the actions that are most appropriate for the situation. This is entirely different to novice practitioners following a step-by-step protocol and being measured on the performance of skills—the hallmark of competency and competency assessment (Eraut, 1998).

Durning et al. (2011) discussed the contemporary theory of ‘situated cognition’—the complex interaction of a medical encounter—as a theory that can help to explain the notion of context specificity. Situated cognition incorporates the components of ‘practitioner factors’, ‘patient factors’ and ‘encounter factors’ as affecting the clinical outcome by recognising the context specifics of each individual encounter (Durning et al., 2011).

Ginsburg et al. (2010) highlighted the tensions created by competency-based education and competing interests for measurable, standardised outcomes on one hand and an authentic representation of the everyday real world of healthcare on the

other. Eraut (1998) discussed the need for capability as an extension to competence when the individual has developed higher levels of expertise and has moved beyond the static notion of competence that he describes as ‘the ability to perform the tasks and roles required to the expected standards’ (p. 135). The expected standards for attaining competency are the minimum standards or base-level skills to practice safely (Cowan et al., 2007), and competency standards are the benchmark for beginning practice (Chiarella et al., 2008). McMullan et al. (2003) discussed the confusion in the literature with the terms ‘competence’, ‘competency’, ‘capability’ and ‘performance’ being used interchangeably and inconsistently. However, it is obvious from the literature that ‘competency’ and ‘competency assessment’ in nursing are aimed at undergraduate students and beginning practitioners, and the concepts of cognition and the context of practice of advanced practitioners are ignored in competency standards and assessment (Windsor et al., 2011; Chiarella et al., 2008; McMullan et al., 2003; Watson et al., 2002).

Eraut (1998) highlighted the dichotomy between the local level of practice, determined by individual organisations and the development of local policies, often in the form of task-based competencies that are designed to meet the needs of employers in reducing the legal liability of the organisation (Bail et al., 2009), and the professional qualifications negotiated at a national level, where professional organisations expect individual nurses to make autonomous clinical decisions according to their level of expertise (Bail et al., 2009). Windsor et al. (2011) described the notion of competency as nursing’s ‘soft skills’, which give scant focus to cognition and context of care. These soft skills may be linked to the notion of productivity, where ‘competence might be preferred to excellence if it results in quicker, cheaper service’ (Eraut, 1994), and where the determination of competence is situated in the employing institutions and local health authorities (Windsor et al., 2011; Bail et al., 2009).

The competency standards adopted for NPs across Australia have been beneficial in explicating major domains within the role, describing NP practice (Carrier et al., 2007) and supporting curricula development (ANMC, 2009). Notwithstanding the value of the ANMC NP competencies, they are generic to all NP models and specialities and describe the fundamental role of NPs in Australia and NZ. There is a

need to develop specialty-specific clinical standards for further elucidation of the specialist NP role and for specialty-specific curricula development (Cole & Ramirez, 2000) as a complement to the existing Australian generic NP standards. There has been limited international research and no Australian research into the development of specialist NP clinical practice standards.

Specialisation of Nurse Practitioners

When NPs were first authorised in NSW in 2000, it was under broad areas of practice underpinned by sub-specialties (NRB NSW, 2000). Some other states that initiated state-based NP authorisation prior to the national endorsement introduced in 2010 also categorised NPs by specialty. Since the establishment of national regulation, the NMBA does not notate a specific area of practice on a NP's endorsement, but it states the expectation that the applicant will only practice in his or her specific area of specialty (NMBA, 2011^b). However, the nature of the NP role is specialised to areas of practice, and even generalist NPs who work in primary care with diverse populations require a specific set of clinical skills and knowledge to inform their education and practice (APNA, 2008). Therefore, as clinical practice varies between specialties and roles, specialty competencies are needed to inform education and authorisation. The Australian generic NP competency standards are augmented by course entry requirements that mandate specialty-specific education and advanced-practice nursing knowledge within the student's chosen specialty area of nursing in order to demonstrate suitability for NP authorisation (NMBA, 2011^a). As specialty-specific competencies for NPs have not been developed in Australia, it raises questions about what is the relevant theoretical and clinical content-specific to the specialty area of practice. It also raises questions about what content is currently being incorporated into the Professional Experience Placement or clinical practicum component of the NP masters curricula.

Specialist Emergency Nurse Practitioner

A national census of Australian NPs was conducted in 2007 (Gardner et al., 2009) and repeated in 2009 (Middleton et al., 2011). This research showed that total

numbers of endorsed NPs increased by 75 per cent over the three-year period, with the fastest growth in the ENP model. In the 2009 census, just over 30 per cent of approximately 400 endorsed NPs in Australia identified their specialty as emergency (Middleton et al., 2011). The latest data from the NMBA show that there are more than 1,000 endorsed NPs in Australia (NMBA, 2014^a). It is posited that there are currently between 250 and 300 endorsed NPs with their specialty practice in emergency care; however, it is not possible to determine how many of these are actually employed in ENP roles.

The evolution of the ENP role in Australia has seen a trend to fill gaps in service delivery (Christofis, 2001; Lowe, 2010). These service gaps, particularly within the public hospital system, are related to increased waiting times, ED overcrowding, decreased patient satisfaction, increase in patients who ‘did not wait’, increase in sub-acute presentations and, to a lesser degree, decrease in ED medical workforce (Christofis, 2001; Lowe, 2010; Jennings et al., 2008; Haines & Critchley, 2009; Wilson & Shifaza, 2008). In many Australian EDs, the development of the ENP role has been fashioned to suit the immediate needs of the individual service and expectations of the institutions (Lowe, 2010) and to offer a ‘quick-fix solution’ to ED service problems (Christofis, 2001; Lowe, 2010). Emergency NPs have often been responsible for developing the role and the individual scope of practice in collaboration with medical colleagues and hospital management, as well as corresponding with the expected service model development (Considine et al., 2006^a; DHS, 2007). The clinical component of the NP masters program is under the governance of the relevant university, but it is supervised locally by a clinical support team that determines the relevant content of the Professional Experience Placement based on the specialty area of practice and the organisational context (QUT, 2014). With no specific clinical educational content developed for ENPs, the local content taught during clinical units is open to manipulation by local management decisions and the clinical support team’s perceptions about the ENP role.

In many situations, the ENP scope of practice has been limited to patient presentations at the lower end of the ATS, concentrating on minor injuries and illnesses (Haines & Critchley, 2009; Considine et al., 2006^a), as this was felt to be

the group of patients where the greatest improvement in service KPIs could be demonstrated. Further, other non-nursing health professions posited that NPs could be useful with this cohort of patients (Lowe, 2010; Considine et al., 2006^b). While the ENP service has been effective in achieving targets for these service outcomes (Considine et al., 2006^b), it raises problems of limiting the most experienced and highly educated emergency nurses to sub-acute care, resulting in the under-utilisation of these senior clinicians (Lowe, 2010; Drummond & Bingley, 2003).

The lack of a consistent professional model in role development for ENPs in Australia has created disparity in service delivery, confusion about the ENP role and limitations to ENP service potential (Carryer et al., 2007). The lack of role clarity has also led many Australian emergency doctors to believe that because ENPs take on some traditional medical duties, such as prescribing and ordering diagnostic tests, that they are medical substitutes (Weiland et al., 2010). There is resistance from medical staff to support the ENP role when it is seen as a political and policy development rather than a valuable addition to the ED service, and when doctors have concerns regarding educational preparation for the role (Weiland et al., 2010). Research has shown that some RNs are reluctant to pursue the ENP role because the work is repetitive and limiting in nature due to the narrow scope of practice focused on low-acuity presentations (Weiland et al., 2010). To overcome these concerns regarding the ENP role, there is a need to more clearly define the practice parameters for the ENP and to develop standards of practice that are relevant to the Australian context and reflect the broad aspects of specialty practice. This will serve to explicate the level of education, knowledge and skill for ENP students, as well as the practice potential for ENP graduates.

The ANMC clearly sees the scope of practice as fluid and open to the need to respond to changing demands. This is reflected in the organisation's definition:

... the full spectrum of roles, functions, responsibilities, activities and decision-making capacity that individuals within that profession are educated, competent and authorised to perform. Some functions within the scope of practice of any profession may be shared with other professions or other individuals or groups. The scope of practice of all health professions is influenced by the wider environment, the specific setting, legislation, policy,

education, standards and the health needs of the population' (ANMC, 2007, p. 2).

The scope of practice of NPs at an individual level is dependent upon the context of practice, consumers' health needs and the level of competence, education and qualifications of the individual. It is also dependent upon service providers' policies, organisational cultures, and quality and risk management frameworks (ANMC, 2007). Developing national clinical practice standards for ENPs will help individual hospitals and local networks to comprehend the potential of the role beyond fast-track, and it will provide an opportunity to integrate ENPs across the ED within a structured framework. The NMBA requires NPs to be competent in their individual scope of practice; however, variability in the educational background of the ENP and the services' needs are as diverse as ED practice itself, which has contributed to disparate and confusing practice scopes for ENPs (Lowe, 2010).

In the US, ENPs have been practicing for more than 30 years (Campo et al., 2008), and four NP masters programs offer emergency as a discrete specialty (Emergency Nurses Association (ENA), 2013). Ramirez et al. (2006) acknowledged that there were no recognised treatment competencies for NPs in emergency care in the US. The Emergency Nurses Association in the US subsequently conducted a Delphi study to identify the specific competencies required by an ENP at entry-level practice (ENA, 2008). The objectives of these competencies is to guide the preparation of NP students who plan to specialise in emergency care and to support existing NPs in emergency care to maintain their skill set (Hoyt et al., 2010). There is an expectation that the use of these competencies underpin competent, quality patient care, and that the competencies provide a model for ENP entry into emergency care practice without prescribing a scope of practice (Hoyt et al., 2010).

In the UK, where the role of NPs is not regulated, the majority of those working with the title of ENP do so in minor-injury units and in primary healthcare settings (Fotheringham et al., 2011; Mason et al., 2006). There is a challenge to ENPs whose work in EDs focuses on minor injuries and illnesses to broaden their practice. This is based on a belief that an Acute Care NP role should be implemented in EDs to manage critically ill or injured patients in order to improve timely treatment for this

group of patients (Norris & Melby, 2006). The recent development of the emergency care practitioner, a role for advanced nurses and paramedics (Department of Health (DOH), 2004), has also caused some confusion when examining the ongoing development of ENPs in the UK (Hoskins, 2011).

In 1998, Cooper et al. (2001) examined the extent and nature of ENP services in Scotland. They described the ENP role as an emerging role whose ‘basic remit appears to be the assessment and immediate treatment or referral of minor injuries’ (Cooper et al., 2001, p. 128). Fotheringham et al. (2011) built on Cooper et al.’s work to examine how the ENP role has evolved. Their findings showed that ENP service has increasingly become part of mainstream healthcare and, while the basis of practice is still limb injuries and wound management, between one-third to one-half of ENPs are now managing acute medical presentations. The progress in Scotland has demonstrated that ENPs have matured to higher-acuity patient presentations and are treating patients with broader complexity. The authors stated that the ongoing development of the ENP role has occurred for a variety of reasons, but mostly due to changes in policy and service design coupled with the acceptance of the role. There is potential to further cultivate the ENP role to incorporate more widespread use of advanced decision-making skills—not just working from protocols or adding more tasks to the role. However, the authors stated that ENPs are not a homogenous group due to differing educational preparation and local service demands (Fotheringham et al., 2011).

In 2005, a call was made by UK Members of Parliament to standardise ENP training (Doulton, 2005). The House of Commons Public Accounts Committee stated that due to inconsistencies in skills taught and the length of courses, there were significant variations in what an ENP can and cannot do, and there was a need for a nationally recognised framework for the training of ENPs (Doulton, 2005).

The current situation with the ENP role in Australia is that many ENPs are still limited by a narrow local practice scope to the treatment of minor injuries and low-acuity presentations (Lowe, 2010; Haines & Critchley, 2009; Considine et al., 2006^a). While the ENP model initially sought to address the needs of patients presenting with minor injuries and illnesses (Lowe, 2010), for roles to be sustainable

and continue in efficacy, and for the ENP workforce to be retained, the roles must be flexible, dynamic and look to future challenges (Lowe, 2010). In EDs, it is inappropriate to restrict the most experienced nurses to low-acuity patients (Haines & Critchley, 2009). Overly restrictive frameworks for practice scope limit the benefits of the ENP role. The expansion of the role to incorporate the care of a wider patient population will provide benefits to a larger number of ED patients (Lowe, 2010).

Other specialty groups of NPs are regarded as experts in their clinical specialty and treat patients across the illness spectrum (Douglas & Bonner, 2011). ENPs are the only group of NPs who, while recognised as experts in their practice, are often limited to working with patients at the lower end of the acuity scale and treat simple and quick presentations. With no specialty competencies or recognised national practice parameters for ENPs, the role will continue to proliferate in a disordered manner, thereby risking the de-skilling of nursing clinical leaders in emergency care in roles where they are quarantined to specific patient groups (Lowe, 2010).

Research in Emergency Nurse Practitioner Competency Development

A systematic search of the national and international literature examined the research related to competencies for ENPs. The question guiding the search was ‘What research has been conducted regarding ENPs’ scope of practice and competencies for education and practice?’

National and international documents through government and professional organisations, as well as published research, was accessed. Electronic databases were the foundation for the search, including the Cumulative Index to Nursing and Allied Health (CINAHL) Medline, Academic Search Elite, E-Journals, Educational Resources Information Centre (ERIC) and Professional Development Collection through EBSCOhost and Google Scholar. The main search headings were ‘emergency nurse practitioner’ and ‘competencies’ and ‘emergency nurse practitioner’ and ‘practice scope’ and ‘nurse practitioner’ and ‘emergency care’ combinations and Boolean links, as illustrated in Table 1. The reference lists of

retrieved papers were scrutinised to identify other literature not identified in the electronic search. The inclusion criteria were:

- limited to the English language
- documents and articles from 1997 to the present
- all research approaches, including qualitative, quantitative and mixed methods
- full-text articles
- peer-reviewed articles.

Table 2.1: Search Terms

Terms	Synonyms/Linked Terms	Boolean
nurse practitioner*	Advanced practice nurse Specialist nurse	And emergency care And emergency care settings
emergency nurse practitioner*		
emergency nurse practitioner*		And competenc* And practice scope

A total of 791 papers were returned for ‘emergency nurse practitioner’. Of these, 31 were full-text, peer-reviewed papers related to ‘emergency nurse practitioner’ and ‘competenc*’. A further 21 full-text and peer-reviewed articles for ‘emergency nurse practitioner’ and ‘practice scope’ were returned. From the initial pool of papers, there were four research papers on ENPs and competencies (see Table 2). There is insufficient published research on the topic to conduct a themed narrative analysis for this review; accordingly, each of the four retrieved papers will be reviewed individually.

Table 2.2: Characteristics of the Four Included Studies

Year and Location of Study	Author/s	Sample	Research Approach	Main Outcomes
2001–2002 England	Mason et al.	17	Pre-/post-test OSCE	<ul style="list-style-type: none">• Improvement in ENP practice performance
2006, US	Ramirez et al.	582, of which 42 were ENPs	Cross-sectional postal survey	<ul style="list-style-type: none">• NP Treatment Competency Instrument validated• 74 competencies found to be relevant to ENP practice
2007, US	Campo et al.	423	Cross-sectional descriptive design	<ul style="list-style-type: none">• 71 procedures identified as being performed by ENPs• Educated through on-the-job training
2007–2008 US	ENA Validation Team— Hoyt et al.	Pre-test 15 Delphi 52	1. Pre-test 2. Three-round Delphi 3. Consensus panel	<ul style="list-style-type: none">• 60 entry-level competencies for ENPs approved

Mason et al. (2005) reported a pilot study on assessing the Continuing Professional Development (CPD) of ENPs by evaluating baseline competencies using Objective Structure Clinical Examinations (OSCEs). This study is essentially a clinical-skills assessment project, but it includes a review of ENP competency. OSCEs have been used to assess medical students since the 1970s; in recent years, they have been progressively used in the assessment of students from nursing and allied health (Rushforth, 2006). This method of assessment was developed to objectively measure medical students' clinical competence, which was often not tested sufficiently, with more traditional methods of assessment, such as written examinations and essays, taking precedence (Ward & Barratt, 2009).

This small study of 17 ENPs working in one UK hospital was conducted on nurses working as, and using the title of, ENPs, with a mean time in the role of 2.3 years. This study focused on ENPs in practice through the application of pre-test and post-test OSCEs, with an educational intervention in-between. It also sought the opinions of ENPs and an unspecified number of senior ED staff about the evaluation of competence and the form it should take. The study was conducted in 2001–2002 in

England over a 10-month period. The educational intervention was devised based on input from the ENPs and senior ED clinicians on what they believed constituted appropriate content. The educational intervention comprised two study days and a series of weekly self-directed teaching sessions, which lasted 30 minutes each. The number of weekly self-directed teaching sessions was not specified.

As a pilot study, this had limited scope. Operational definitions were poor, as this was done within an unregulated legislative framework for advanced practice roles. This study cannot be compared to the current practice environment for ENPs in Australia, where NPs are regulated and authorised after completing a master's degree or proving equivalence and demonstrating their competence against the generic NP standards (NMBA, 2011^b).

Ramirez et al. (2006) conducted a cross-sectional survey to establish a definition of the ENP by examining their treatment competencies. The main aim of this research was to test the 'Nurse Practitioner Treatment Competency Instrument' (NPTCI) that had been created by the lead author and to measure the internal consistency reliability estimates for the instrument. Within the NPTCI was an activities/task analysis component, with items derived from the National Organisation of Nurse Practitioner Faculties (NONPF) competency document (2002), which was developed for family and acute-care NPs. The specific domains from the NONPF document used by Ramirez et al. (2006) for their research were 'Management of Patient Health/Illness' status, subsection 'Plan of Care', 'Implementation of Treatment' and treatment standards of care for ENPs. The authors claimed that these headings correlated to the clinical practice of ENPs. Prior to the mail-out for the main study, the content validity of the NPTCI was established by a panel of six experts in the specialty areas of family, acute care and emergency care, although the specific designation of the experts was not described.

This study was a descriptive postal survey with a national sample of NPs. The sample was drawn from two different NP groups: the first group from a cohort of credentialed family and acute-care NPs, and the second group were known graduates of ENP specialty courses. Eighteen hundred questionnaires were sent out to potential participants, with a response rate of 36 per cent (582). Of the respondents, 7.2 per

cent (42) were ENPs. The questionnaires consisted of a demographic component with 12 items and an activities/task analysis component with 89 items. The activities/task section was scored on a four-point scale that measured the relevance of each task to ENP practice, with 1 being 'not relevant' and 4 being 'very relevant'.

The results showed that ENPs perform tasks that fall into the recognised areas of family and acute-care NP competencies, 'performing tasks' and 'managing urgent and emergency patient care'. Of the 89 original items on the questionnaire, 74 were found to be relevant to ENP practice. Some of the technical procedures were marked as not relevant to ENP practice by respondents. The authors claimed that this was related to a lack of re-imbursement for ENP service compared with 100 per cent reimbursement for emergency physicians, and that individual hospitals that determined NPs' hospital privileges did not allow ENPs to perform certain procedures because of a lack of reimbursement.

Ramirez et al. (2006) stated that the findings from their research indicated that ENPs need specialised training. One option put forward to achieve this was for recognised NP educational programs to incorporate emergency competencies above and beyond the existing family or acute-care focus. The authors stated that without established competencies in the specialty emergency area, the role of the ENP would not expand, and that establishing emergency competencies and activities would give recognition to the specialty group of ENPs.

The items included in the questionnaire showed that the majority of items described tasks or specific clinical procedures such as 'performs lumbar puncture' or 'performs interventions that utilise technological devices to sustain physiologic function e.g. intubation'. The procedure lists were extensive and covered all facets of emergency care, from minor injuries to emergency intubation, and they carried many procedures that were performed infrequently by NPs working in an emergency care setting (ECS).

This large, national study was informative and supportive of the development of ENP-specific treatment competencies with a focus on clinical skills and tasks. With scant inclusion of higher-level problem-solving and professional thinking, the

competencies quantify a task rather than high-order integration of professional knowledge that demonstrates context specificity (Ebrall, 2007). Further, for such a large sample of NPs, fewer than 10 per cent of respondents were ENPs, which plausibly attenuated the results.

Campo et al. (2008) studied procedures and education being used by NPs in emergency care settings (ECS). A web-based electronic survey was distributed via the American Academy of Nurse Practitioners (AANP) to 1,799 NPs who designated the emergency/urgent care setting as their primary practice setting. There were a total of 508 responses prior to the advertised cut-off date (a response rate of 28.4 per cent). Of the 508 respondents, 423 who were currently working in the ECS were eligible to participate in the study. The electronic survey used the 'Activities and Procedures Instrument', which was an inventory questionnaire containing 71 activities and procedures that NPs were asked to rate according to the following research questions:

- What was the frequency of procedures performed by NPs in ECS?
- How frequently did NPs perform the identified procedures independently and directly supervised?
- Where did the NPs receive the majority of education for performing the identified procedures in the ECS?
- How confident did NPs feel performing the identified procedures in the ECS?

The list of procedures and activities for the inventory was taken from a medical text, 'Emergency Medicine' (Roberts & Hedges, 1998), as the authors stated that no data were available on the performance of procedures by NPs in ECSs. All 71 procedures were performed by at least one NP respondent.

All four questions asked of each of the 71 items were rated on a scale of 1–4. However, this was not a continuous scale; rather, it mixed quantitative and narrative selections according to the responses for the above four questions. Procedures that were performed infrequently would be removed from the final list and deemed irrelevant to practice, as they required frequency of performance to maintain

competence. The ability to perform procedures with confidence was seen as equating to competence because the authors judged that knowledge and experience lead to higher levels of competence. Frequency was also considered a marker for inclusion on the lists when it came to defining a feasible list of procedures for education. Most of the procedures were learnt through ‘on-the-job training’, and the least frequently performed procedures were often supervised. The results of the study suggested that a wide range of procedures is being performed in the ECS, and that most of the education to perform these procedures was obtained by ‘on-the-job training’. This is an important finding, as it gives substance for curricula development that is appropriate for the clinical education of NPs. While this research was not about developing specialty competencies for ENPs, it served to describe the procedures performed by NPs in the ECS, and it has relevance to the procedures performed by ENPs and the required education.

The most robust of studies conducted on ENP competencies was by the ENA in the US. This group developed an agreed competency document for NPs in emergency care (ENA, 2008), which was grounded in the two previously described studies on ‘treatment competencies’ (Ramirez et al., 2006) and ‘procedures performed’ (Campo et al., 2008) by NPs working in ECSs. This study by the ENA NP Validation Work Team developed ENP entry-level competencies, which were published by ENA in 2008, but a more in-depth article describing the research was published by Hoyt et al. in 2010.

The study was conducted over a nine-month period in 2007–2008. The ENA NP Validation Work Team developed an initial list of competencies for ENPs, which was revised by an expert team of eight participants who had research or practice expertise in the role of the NP. The next stage of the study was a three-round Delphi study, which used NPs practicing in emergency care and the developed document from the expert team who revised the original competency list. Following the Delphi study, an external Consensus Panel met to finalise the competency document. Participants for the Delphi study were recruited through the ENA website and ENA newsletters. The inclusion criteria were that the NP was currently credentialed to practice as an NP and currently practicing in emergency care, described as a broad sample of settings including EDs, fast-tracks in rural, urban and community

hospitals, free-standing clinics, pre-hospital settings and prison systems. A total of 204 NPs expressed interest, were deemed eligible to participate and were sent questionnaires electronically. The authors did not provide details of the ENP population size in the US at the time of the study.

The Delphi study's first round returned 128 responses, while the second round returned 73 responses from the same group as the first round, and the third round returned 52 responses from the same group as the first and second round. For each competency, three questions were posed:

1. How important is this competency for all NPs working in emergency care?
2. How important is this skill for NP practice in emergency care?
3. How frequently do NPs perform this skill when practicing in emergency care?

Each participant was asked to respond on a six-point Likert scale for each question. For questions 1 and 2 on importance, the scale was from 1 ('not at all important') to 6 ('very important'). For question 3 on frequency, the scale went from 1 ('never') to 6 ('very frequently'). Each round was conducted to achieve group consensus, and competencies were included in the final list if 80 per cent or more of respondents rated the competence as 4 or higher. All competencies deemed suitable for entry-level practice by 60 per cent or more of the participants were included in the final list. There were 107 competencies included for the first round of the Delphi study. Nine competencies were eliminated because they were considered an advanced level and therefore not suitable for entry-level practice (e.g., 'Inserts nasotracheal tube for intubation' and 'Inserts pins for skeletal traction'). At the completion of the third round of the Delphi study, 83 of the 111 competencies had achieved consensus for inclusion in the final list.

Following the Delphi study, a Consensus Panel met, which comprised stakeholders such as NP organisations, emergency nurses and emergency physicians, and representatives from educational, credentialing, certification and regulatory organisations. The list of 83 competencies was given to the Consensus Panel following the Delphi study for review and discussion, and the panel reduced the number to 60 entry-level competencies for NPs practicing in emergency care. The

final list of competencies was approved by the ENA Board of Directors and sent to stakeholder organisations for final approval and endorsement.

This was a comprehensive study to examine and determine practice competencies for NPs working in ECSs in the US. It has been the only one of its kind internationally. However, the authors described ‘competencies for practice’ and, similar to Ramirez et al. (2006) and Campo et al. (2008), they produced a list predominantly comprising tasks or procedures rather than higher-level competencies that broadly reflect the professional clinical practice and knowledge base of ENPs.

Conclusion

The research conducted in the US on ENP competencies is informative and groundbreaking, mainly addresses procedures and tasks. The legislation, educational preparation and practice settings for ENPs in Australia are different from those in the US; therefore, while this body of work can inform research in Australia, it would be problematic to adopt the findings of overseas research to the Australian context.

In the absence of specialty clinical competency/practice standards for ENPs in Australia, there is no benchmark to ensure that standardised theoretical and clinical specialty content is incorporated into educational preparation prior to endorsement. In light of the current variability in ENP clinical education and the potential for inadequate advanced development of the ENP student, it is important to consider the development of ENP specialty clinical practice standards. This will facilitate a better understanding of the potential breadth of the ENP role and assist in the individual professional development and ongoing evaluation of competence of the ENP. Specialty-specific ENP standards will contribute to curricula development for tertiary education courses and appropriate educational preparation for the ENP role. While tasks and procedures are elements of competency, expert professional practice is about understanding the reasoning behind the tasks and the deeper knowledge required for competent performance. Establishing specialty clinical practice standards for ENPs requires recognition of professional academic knowledge and clinical skills.

In the US, where many NPs entering practice in ECSs do not have prior experience in emergency clinical care, procedure lists to inform their educational needs may be relevant. In Australia, NP students enter their courses as specialists and are senior clinicians in their specialty. A component of NP education in Australia is the Professional Experience Placement or clinical experiential learning. Clarification of the clinical learning needs of ENPs and the development of emergency specialty standards will enhance the Professional Experience Placement to address the clinical fundamentals for emergency practice. However, the development of a clinical skills or procedure list for Australian ENPs will not be sufficient to address the higher level of knowledge required to inform the application of skills, knowledge and experience required behind the performance of a skill or task.

The next chapter describes the pilot study conducted in Queensland to test the feasibility of the research methods and to assess the viability of developing clinical practice standards nationally.

Chapter 3: Feasibility Study: Publication One

Introduction

The pilot study was designed and conducted to test the feasibility of the data collection methods and to assess the viability of the development of clinical specialty practice standards for ENPs. The study was conducted in late 2011 and early 2012 in Queensland. The main finding from the study was confirmation of the viability and proof of concept to conduct a national study with practicing ENPs to develop clinical specialty practice standards. The mixed-methods research design as two arms of the pilot study demonstrated an appropriate design to achieve the overall aims of the main research. An amendment was implemented to the qualitative data collection due to findings from the pilot study that a focus group process was problematic when exploring the individual practice of ENPs. The focus group was also found to be difficult to audio record due to people talking over each other with the potential for some individuals to dominate. This finding from the pilot study informed modification to the approach to data collection for the national study through the plan to conduct individual interviews instead of focus groups.

A further finding from the pilot study was that, of the three standards in the existing generic ANMC National Nurse Practitioner Competencies (ANMC, 2006) at the time of the study, only those in Standard 1: Dynamic Practice, were applicable for conversion to specialty clinical standards, while Standards 2 and 3 were relevant across all specialties of NP practice. Therefore, the research into the practice parameters and the development of specialty ENP practice standards has concentrated on the clinical aspect of the role, as this is specialty focused.

Contribution of authors

This manuscript presents the pilot study conducted by J O'Connell under the supervision of G Gardner. The principal authors are J O'Connell and G Gardner.

Publication 1: Development of Clinical Competencies for Emergency Nurse Practitioners: A Pilot Study

Publication status: Published

Australasian Emergency Nursing Journal

Publication details: O'Connell J & Gardner G (2012). Development of clinical competencies for emergency nurse practitioners: A pilot study. *Australasian Emergency Nursing Journal* 15(4), 195–201.

Abstract

Background: Nurse Practitioner education and practice has been guided by generic competency standards in Australia since 2006. Development of specialist competencies has been less structured and there are no formal standards to guide education and continuing professional development for specialty fields. There is limited international research and no Australian research into development of specialist nurse practitioner competencies. This pilot study aimed to test data collection methods, tools and processes in preparation for a larger national study to investigate specialist competency standards for emergency nurse practitioners. Research into specialist emergency nurse practitioner competencies has not been conducted in Australia.

Methods: Mixed-methods research was conducted with a sample of experienced emergency nurse practitioners. Deductive analysis of data from a focus group workshop informed development of a draft specialty competency framework. The framework was subsequently subjected to systematic scrutiny for consensus validation through a two-round Delphi study.

Results: The Delphi study's first round had a 100 % response rate; the second round had a 75% response rate. The scoring for all items in both rounds was above the 80% cut-off mark, with the lowest mean score being 4.1 (82%) from the first round.

Conclusion: The authors collaborated with emergency nurse practitioners to produce preliminary data on the formation of specialty competencies as a first step in developing an Australian framework.

Keywords: emergency nurse practitioner, clinical competencies, clinical nursing research, mixed-methods research, Delphi technique

Background

The Nurse Practitioner (NP) role was initiated in the USA over 50 years ago to facilitate delivery of primary healthcare in the community setting.¹ Since that time, the role has been implemented in many countries in a variety of clinical settings and specialties.

The NP role in Australia is regulated and the title is protected by legislation. Development of NP service had its inception in NSW Health with the NP Pilot Project in 1994–1995. Following the positive findings from this study, all states in Australia thereafter developed their own models under separate legislative arrangements for NPs in acknowledgment of the future potential of the role to enhance healthcare in Australia.² Each state had separate laws governing NPs until 2010, when the Nursing and Midwifery Board of Australia (NMBA), under the authority of the Australian Health Practitioner Regulation Authority, became the single regulatory authority for nurses, midwives and NPs.³ Currently in Australia, to be endorsed as a NP, applicants are required to have completed a national board-approved masters program or relevant educational equivalency.³

The role of the NP in Australia was reinforced and clarified by the Australian Nursing and Midwifery Council (ANMC) commissioning research to develop generic NP competency standards.⁴ This was an important development in explicating the level of knowledge and expertise expected of this group of senior nurses. The ANMC NP competency standards were implemented nationally in 2006 and became the benchmark for determining curricula for Nursing Regulatory Authorities approved masters degrees and assessing eligibility for authorisation as a NP in Australia.⁵ These competency standards are generic in context and content for all NPs across Australia and within all specialties.

A national census of Australian NPs was conducted in 2007⁶ and repeated in 2009.⁷ This research showed that total numbers of NPs increased by 75 % over the two-year period, with the fastest growth in the emergency NP model. In the 2009 census, 30.3% of NPs identified their specialty as emergency—a proportional increase of 12%.⁷

The evolution of the emergency nurse practitioner (ENP) role in Australia over the past eight years has seen a trend to fill gaps in emergency department (ED) care.^{8,9} These service gaps include increased waiting times, ED overcrowding, decreased patient satisfaction, increase in patients who ‘did not wait’, increase in lower-acuity presentations and, to a lesser degree, decrease in the ED medical workforce.⁸⁻¹² In many Australian EDs, the development of the ENP role has been fashioned to suit the immediate needs of the individual service and expectations of the institutions,⁹ and to offer a quick-fix solution to ED problems.^{8,9} The development of the ENP role and practice scope for individual ENPs has been in collaboration with medical colleagues and to suit the service model expectations.^{13,14} In many situations, the ENP practice scope has been limited to patient presentations at the lower end of the ATS, concentrating on minor injuries and illnesses,^{11,15} as these were patient groups where the ENP role could contribute to improving KPIs.⁹ While ENP models have been effective in achieving targets for service gaps,¹³ most models limit the most experienced and highly educated emergency nurses to the care of Australasian Triage Scale (ATS) category 4 and 5 patients, resulting in the potential under-utilisation of these senior clinicians^{9,16} who, prior to endorsement, worked across the breadth of the ED as clinical experts and leaders.

In the UK, where the NP role is not regulated, the majority of those working with the title of ENP do so in minor-injury units and primary healthcare.¹⁷ There is a challenge from the health system and senior management to those ENPs whose practice has been focused on minor injuries and illnesses to broaden their practice, as there has been speculation that an acute-care NP role should be implemented in EDs to manage critically ill or injured patients to improve timely treatment for these patients.¹⁸

A consequence of the *ad hoc* development of the ENP service model is confusion about the parameters of practice and practice capability for ENPs.⁹ In the Australian context, local practice scope impositions do not reflect the broad expertise of ENPs.

In the US, ENP preparation is offered at the masters level as a discrete specialty.¹⁹ In response to concerns about the lack of formal clinical competencies for NPs in

emergency care in the US,²⁰ the American Emergency Nurses Association conducted a Delphi study to identify the specific competencies required by an ENP at entry level to practice.²¹ The intent of these competencies was to guide the preparation of NP students for specialist emergency care, to support existing NPs in emergency care to maintain their skill set, and to provide a model for ENPs' entry into emergency care practice.²² The competencies developed in the US are not appropriate for adoption within the Australian setting, where there are legislative and practice differences and variations in practice settings.

In the absence of specialty competencies for ENPs in Australia, there is no benchmark to ensure that standardised theoretical and clinical specialty content has been covered prior to endorsement. In light of the variability in ENP clinical education within masters programs across Australia, which are usually directed by a local clinical team, it is timely to consider the development of ENP specialty clinical competencies. This will facilitate a better understanding of the potential breadth of the ENP role and assist with curriculum development for tertiary education courses. Specialty-specific ENP competencies will also assist in the professional development and ongoing evaluation of competence of individual ENPs.

This paper reports a pilot study in preparation for the development of research-based national ENP competency standards for the Australian setting.

Methods

The aim of this pilot study was to test the data collection methods, data collection tools and research processes for a larger national study. In addition, the publication of a pilot study serves to communicate information on emerging research activity to the discipline.²³ Accordingly, the publication of this pilot study brings to the attention of the national and international NP community that research into specialist ENP competencies is being conducted within Australia. The pilot was a mixed-methods research study that used a two-phased approach, including a focus group workshop and the Delphi technique. This sequential approach is appropriate when the outcome of the qualitative exploratory research is required to inform the subsequent quantitative measurement of a phenomenon.²⁴

Study participants and recruitment

The recruitment of participants was conducted through the Queensland Statewide ED Network NP Sub Committee, which had 39 members at the time of the study. Endorsed ENPs working in an established role in Queensland were provided with an information and consent package and invited to participate in the study. Criterion sampling was used,²⁵ and criteria for inclusion were: being an endorsed ENP and working in an established ENP role. From the list of consenting ENPs, five participants were randomly selected to participate in the focus group workshop phase and 12 participants were randomly selected to participate in the Delphi study phase.

Phase One: Focus Group Workshop

A workshop forum was used to conduct a focus group interview with a sample of ENPs. The focus group approach was used because it allows for dynamic interaction whereby each participant builds upon the perspectives of others in the group²⁴ using the extant generic NP competency framework (see Table 1) as a framework.

Table 1: National Competency Standards for the Nurse Practitioner (ANMC 2006)³⁵

Standard 1: Dynamic practice
<i>Competencies</i>
1.1 Conducts advanced comprehensive and holistic health assessment relevant to a specialist field of nursing practice.
1.2 Demonstrates a high level of confidence and clinical proficiency in carrying out a range of procedures, treatments and interventions that are evidence based and informed by specialist knowledge.
1.3 Has the capacity to use the knowledge and skills of extended practice competencies in complex and unfamiliar environments.
1.4 Demonstrates skills in accessing established and evolving knowledge in clinical and social sciences, and the application of this knowledge to patient care and the

education of others.
<p>Standard 2: Professional efficacy</p> <p><i>Competencies</i></p> <p>2.1 Applies extended practice competencies within a nursing model of practice.</p> <p>2.2 Establishes therapeutic links with the patient/client/community that recognise and respect cultural identity and lifestyle choices.</p> <p>2.3 Is proactive in conducting clinical service that is enhanced and extended by autonomous and accountable practice.</p>
<p>Standard 3: Clinical leadership</p> <p><i>Competencies</i></p> <p>1.1 Engages in and leads clinical collaboration that optimise outcomes for patients/clients/communities</p> <p>3.2 Engages in and leads informed critique and influence at the systems level of healthcare.</p>

Data Collection: The Focus Group Workshop

The focus group workshop consisted of five participants. The workshop used the Australian generic NP competencies (see Table 1) to guide the interview and provide a focus for participant discussion and a template for the documentation of individual responses to the discussion. The framework guided the interrogation and debate regarding relevant skills and competencies for specialty ENP practice at the entry level. The focus group was audio recorded and transcribed to facilitate data analysis, and all data were de-identified. The framework documents were collected at the end of the workshop and, together with the audio recordings of the discussion; they constituted the phase one data.

Data Analysis: The Focus Group Workshop

The data generated from the focus group interview were summarised using content analysis techniques guided by the existing generic NP competency framework.

Phase Two: Delphi Study

The main aim of the Delphi technique is to achieve group consensus from expert participants.²⁶ The Delphi technique is a group facilitation process where individual judgements can be tapped and group opinions combined to address an incomplete state of knowledge.^{26,27} The Delphi technique can run over several stages and uses each stage to build on the results of the previous one by reflecting the participants' own views back to them in such a way that they can proceed with the next stage.²⁸ In this pilot project, the draft ENP specialist competencies developed from phase one were subjected to a two-round Delphi process. The research objective was to test the draft ENP specialist competencies to achieve consensus from a panel of experts in the field.

Data Collection: Delphi Study

The outcome of the phase one study was to identify four draft ENP specialist competencies and 25 draft performance indicators. These were incorporated into a Delphi data collection tool, which listed each competency and performance indicator against a five-point Likert scale,²⁶ with 1 being 'strongly disagree' and 5 being 'strongly agree'. There is no definitive evidence base for a scale structure; a five-point Likert scale is a common choice because it allows for a no-commitment option.²⁹ Participants were required to assign a score to each competency and performance indicator to indicate their level of agreement with the concept and the language. The document included a space for participants to record individual comments and instructions for completion and return to the investigator. Two rounds were conducted to achieve consensus among the expert participants.²⁶

Data Analysis: Delphi Study

In the first Delphi round, individual participants' scores were summarised to achieve a mean score for each item and subsequently consensus of the derived list. A commonly accepted method for determining consensus is to attribute a percentage value to the level of agreement, which can vary from 51 per cent to 100 per cent.³⁰ For this study, the predetermined cut-off for consensus was 80 per cent.

Research Ethics Statement

Ethical clearance for the study was gained from the relevant University Human Research Ethics Committee, and the study was conducted according to the National Health and Medical Research Council (NHMRC) standards for the ethical conduct of research.³¹

Results

Phase One: Focus Group Workshop

The outcome from analysis of the qualitative data was draft ENP specialist competencies. The data revealed the consensus view that, of the three generic NP standards (see Table 1), only the competencies in Standard 1: Dynamic Practice were applicable for conversion to specialty competencies, while Standards 2 and 3 were relevant across all specialties. Hence, the outcome of phase one was a first draft of four specialist competencies and 25 performance indicators (see Table 2 for draft competencies).

Phase Two: Delphi Study

The expert panel for the Delphi survey comprised 12 endorsed ENPs from across Queensland. There were eight female and four male participants, and all panel members worked in ENP roles in a variety of ED settings, including six large metropolitan hospitals, one base hospital, one large outer metropolitan hospital and four rural hospitals. The same panel members were used for both Delphi rounds.

Round One

Round one of the Delphi study had a 100 per cent response rate. The scoring for all items was above the 80 per cent cut-off mark, with the lowest mean score being 4.1 (82 per cent) for performance indicator 1.3.5: 'Demonstrates clinical expertise in managing presentations of a life threatening nature including resuscitation and stabilisation'.

The combined mean score for all four competencies and 25 performance indicators was 4.7 on a five-point scale, which equates to 94 per cent agreement, with a standard deviation for round one of 0.19. All competency statements and performance indicators were scored individually prior to calculating the mean score for each item. No items were deleted for the second round. Some of the comments received in round one of the Delphi questionnaire related specifically to the individuals' practice scope and the local limitations imposed on their role. These comments led to a reminder in the second round that this research relates to national ENP competencies and not practice scope or individual practice.

The data from the first round of the Delphi study informed minor changes to the wording of the document for the second round. The second-round document was sent out with 'track changes' showing the minor adjustments suggested, and participants were asked to score this round based on their agreement with the statement and the minor changes. Participants were also provided with information on the tendency and dispersion of scores from the previous round, as well as their scores in relation to the overall scores.²⁶

Round Two

The second round of the Delphi study had a 75 per cent response rate; again, the combined mean score for all four competencies and 25 performance indicators was 4.7 on a five-point scale, which equates to 94 per cent agreement, with a standard deviation for round two of 0.13. As in round one, all competency statements and performance indicators were scored individually prior to calculating the mean score for each item. Six items (20.6 per cent) scored slightly lower in the second round

than the first round, but all scored above 4.4 (88 per cent). The lowest scoring item from round one (performance indicator 1.3.5) scored higher in round two, rising from 4.1 (82 per cent) to 4.6 (92 per cent).

When commenting on competency 1.4, one participant in round two stated: *‘The NP role is regarded by many managers as solely clinical delivery without recognising the need for continuing skills and knowledge acquisition. This creates the risk of role stagnation leading to irrelevance.’*

Table 2: Draft ED NP Specialty Competencies

Standard 1	Dynamic practice that incorporates the application of high-level knowledge and skills in extended practice across stable, unpredictable and complex situations.	Delphi Round 1	Delphi Round 2
<u>Competency 1</u> Focus: Patient Assessment & Diagnosis	<i>Conducts advanced comprehensive and holistic health assessment relevant to emergency practice, applicable to a range of geographical and service contexts</i>	M 4.6 SD 0.49	M 4.7 SD 0.44
<u>Competency 2</u> Focus: Interventions, Treatments & Procedures	<i>Demonstrates a high level of confidence and clinical proficiency in carrying out a range of procedures, treatments and interventions that are evidence-based and informed by emergency specialist knowledge of clinical practice in emergency environments and contexts</i>	M 4.7 SD 0.45	M 4.8 SD 0.33
<u>Competency 3</u> Focus: Urgent & Unpredictable Events	<i>Has the capacity to use the knowledge and skills of emergency advanced practice competencies in complex, unfamiliar and dynamic environments</i>	M 4.7 SD 0.62	M 4.5 SD 0.52
<u>Competency 4</u> Focus: Accessing Established & Evolving Knowledge	<i>Demonstrates skills in accessing established and evolving knowledge, protocols and clinical guidelines in clinical and social sciences, and the application of this knowledge to patient care and the education of others in the emergency setting</i>	M 4.9 SD 0.29	M 4.7 SD 0.44

M = Mean score

SD = Standard deviation

Discussion

This pilot study indicated that the development of clinical competency standards for ENPs concentrates on practice at an advanced level and can be informed by the generic NP Competency Standard 1: Dynamic Practice, as a blueprint to cultivate competencies and performance indicators that reflect the specialist practice of ENPs. While the results of the Delphi study were positive, with each competency (n=4) and performance indicator (n=25) scoring over 82 per cent agreement for both rounds, there were some interesting issues highlighted by the free-text comments provided in the returned questionnaires.

Some participants responded to the statements in the questionnaire based on their individual practice scope rather than focusing on national-level competencies. One participant stated, '*Current practice restricted by medically determined scope of practice*'.

This correlates with the role confusion and subsequent lack of clarity regarding the parameters of the ENP role as described by Lowe (2010).⁹ These findings also provide an important direction for the national study; that is, that research into ENPs' perceptions of parameters of NP practice in their specialty field will provide important data for the development of specialty competencies.

Six of the 12 respondents commented that their practice was still limited by a lack of provider numbers that allow Medicare reimbursement for their service and certain legislation, including the *Radiology Safety Act*. While national registration and regulation was initiated in 2010, many health-related policies still operate at a state level in Australia; therefore, there are variations in state regulatory acts such as pharmacology and radiation safety. Six of the Queensland ENP respondents in this pilot study reported difficulty with the Queensland Health Diagnostic Radiography Protocol³² providing a barrier to ordering diagnostic radiography tests other than plain X-rays.

Round two of the Delphi study had a 75 per cent response rate; three participants did not return their questionnaires. It was determined that a lower response rate in round

two was acceptable, as the scores from round one were consistently high and reached consensus. The second-round Delphi mean scores were the same as the first-round scores.

Specialty competencies for the ENP will provide guidance for educational preparation for the role, and governance will be more consistent for ENPs at entry-level practice.²¹ While health service planning and practice scope documents for implementing an ENP position can be customised to meet specific service needs, the evolving nature of the ENP role, and indeed the individual ENP clinician, needs to progress with broad national competencies to guide the local practice scope and facilitate role expansion.⁹ Many sites that employ ENPs have single practitioners or low numbers of ENPs, often determined by service needs that dictate a role with a narrow scope that concentrates on minor illness or injuries.^{9,12} Being a single practitioner can lead to clinician burnout and an unreliable service model.¹¹ Issues of sustainability of the NP role³³ and ongoing competence and continuing professional development⁹ of individual NPs are also of concern.

This pilot study has established proof of concept for the development of ENP specialist competencies, and it has supported the need for further large-scale research in this area. By developing broad, national ENP competencies, local management committees will have a guide for the educational preparation of ENP students;²² this will inform the ongoing development of the role and individual clinicians.³⁴ Specialist competencies will also guide universities when developing NP curricula and assessing student performance³⁵ within the emergency care environment.

Limitations

This pilot study was small in scale and limited to one Australian jurisdiction. Therefore, the findings cannot be considered representative of the views of ENPs outside of Queensland in terms of the development of national ENP specialist competencies. However, the study met the research aims in that the tools and processes were tested. The findings indicated that method enhancement is necessary for a national study to obtain data related to the parameters of ENP practice.

Conclusion

The outcome of this two-phase research study was a draft competency framework for the specialist ENP that specifically addressed the competencies in Standard 1: Dynamic Practice.

Emergency departments cope with large volumes of undifferentiated patients. In many situations, discussions ensue regarding the development of other innovative clinical roles to meet demands. By defining the capability of the ENP role and maximising those who have been endorsed to practice at this level, all aspects of emergency care can be embraced by ENPs and provide further impact on time to clinical care and patient throughput for all patients, regardless of triage category.

Funding

This project was funded by the Nursing and Midwifery Office, Queensland Health.

Provenance and Conflict of Interest

No conflict of interest has been declared by the authors.

Acknowledgements

The authors would like to thank the Queensland ENPs who participated in this research study.

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Chapter 4: Research Design

Introduction

Previous chapters have established that ENPs in Australia work in diverse and locally developed practice models. These models have been implemented in an *ad hoc* manner, and the educational requirements for the individual ENPs have been disparate, disorganised and locally governed. These circumstances require that some agreement on the ongoing development and future educational requirements of the role should occur to achieve consistency. There has been no research conducted to describe the parameters of ENP practice in Australia or the expected practice standards for ENPs.

The previous chapter demonstrated that the pilot study was able to establish the feasibility of a larger study and proof of concept for the research. Further, the pilot study revealed that a two-phase design was appropriate, and it revealed the limitations in the methods used. The outcome of the pilot exercise was the refinement of the research approach while also communicating through publication to the ENP community that a national study was pending. This chapter reports on the overall research design and the ethical implications for this study.

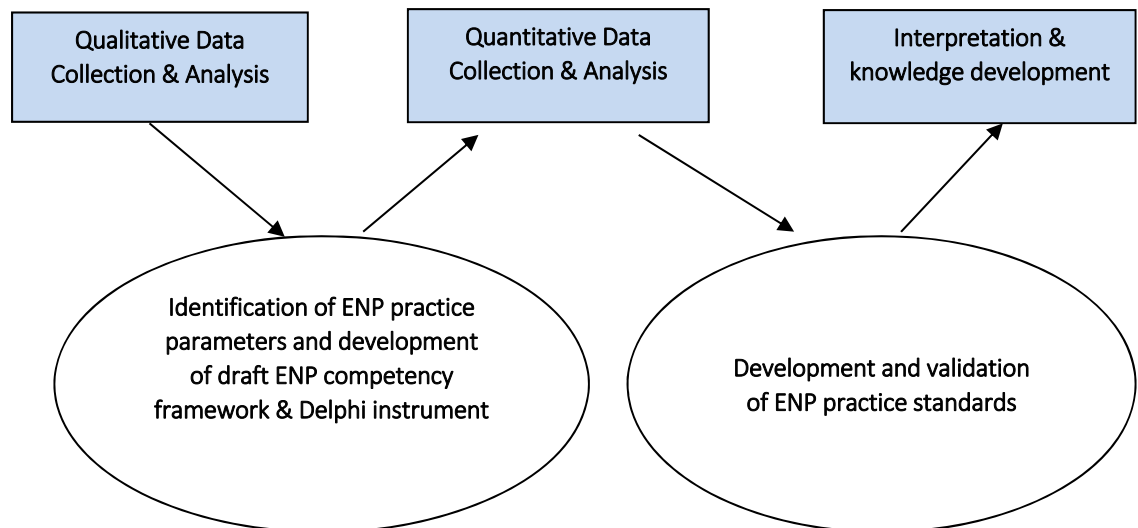
Mixed Methods Research

The national study used a mixed methods research design, which provides a flexible and diverse approach to researching complex topics and incorporates both qualitative and quantitative approaches to data collection and interpretation. Creswell and Plano Clark (2011) are leading methodologists in mixed methods research, claiming that this approach enables researchers to develop skills and experience in a range of techniques and tools that are most appropriate for the complex questions being studied today. The advantage of mixed methods research is that the approach can produce a broad understanding of the entity being studied, with each approach enhancing and complementing a body of data (Cooper et al., 2011).

Creswell and Plano Clark (2011) classified mixed methods research into four main designs: triangulation, embedded, explanatory and exploratory. This list was developed from a synthesis of classifications developed in a range of disciplines (2011, pp. 60–62). Nursing's contribution to this was Sandelowski's work (2000) on dealing with qualitative and quantitative data, where she suggested that mixed methods research expands the scope and improves the analytic power of nursing studies. Data collection in mixed methods research is also classified into concurrent and sequential approaches, and this classification is determined by the specific design. This study will use the exploratory design and sequential data collection to investigate and develop ENP specialist competencies.

In an exploratory sequential mixed methods research design, the investigator is able to generalise the qualitative findings from a small number of individuals in the first phase to a larger sample in the second phase. The intent of the design is that the collection and analysis of the qualitative data will assist in developing an instrument to collect quantitative data, and that the results can generalise or expand on the initial qualitative data (Creswell & Plano Clark, 2011). The sequential phases in this study will be structured into 'consultation' phase one and 'consensus' phase two.

The overview of the research approach for this thesis is: 1) the consultation phase, which produced qualitative data through interviews with authorised ENPs; and 2) the consensus phase, which produced quantitative data through a two-round national Delphi study with a population sample of ENPs. This exploratory two-phase approach is usually adopted when little is known about a phenomenon (Cooper et al., 2011; Creswell & Plano Clark, 2011) (see Figure 1).



Adapted from Creswell and Plano Clark (2011, p. 76)

Figure 4.1: Exploratory Sequential Design

The research questions guiding the overall study were:

1. What are the parameters of practice for ENPs?
2. What are the extended-practice clinical and professional skills and attributes for ENP practice?
3. How can competency standards designate advanced practice and differentiate the attributes from beginning-level practice?

Phase 1: Qualitative Data Collection—Consultation Phase

Participants and recruitment

Individual interviews were conducted across Australia with endorsed ENPs working in an operational and established ENP role. The demographics of the ENPs were collected for the interview phase.

Purposeful sampling was used. This approach, also called criterion sampling, is the intentional recruitment of participants who fit specific criteria for inclusion and have experienced the phenomenon under research (Creswell & Plano Clark, 2011). The criteria for inclusion in this study were:

- an endorsed ENP
- working in a recognised NP role in emergency care
- established in the role.

The sites for recruitment:

- both metropolitan and non-metropolitan settings
- in all states of Australia where there are established ENP roles.

Recruitment was conducted by invitation through the Australian College of Nurse Practitioners' (ACNP) national conference in September 2012 and through the college website in October 2012. Tasmania and the Northern Territory did not participate in the research, as the role in these areas was in its infancy and no responses were received to the invitation to participate in the research. Forty-six potential participants responded to the invitation. Of these, 20 participants were selected through stratified random sampling, using a table of random numbers, across jurisdictions proportional to the population size of ENPs in each state. There were six participants from NSW/Australian Capital Territory, six from Queensland, four from Victoria and two each from South Australia and Western Australia. There were 13 female and seven male participants, with a mean age of 44 years (range 32–64 years). The mean length of endorsement as an ENP was four years (range 0.5 to 9 years).

Individual interviews

Open-ended individual interviews with 20 ENPs constituted the data collection for phase one of the research. Unstructured interviewing can assist in understanding the complex behaviour of individuals without imposing limitations to their field of thought (Fontana & Frey, 2003). It permits interviewers to immerse themselves in the culture and respond reflexively to the information offered for a deeper understanding of the narrative (Fontana & Frey, 2003, p. 74). Indications from the pilot study showed that rather than using focus groups, individual interviews would result in high-quality data based on each participant's experiences and perceptions. Data were collected from December 2012 to February 2013 through interviews with

consenting ENPs. A ‘minimum data interview guide’ (see Appendix A) was developed, directed by the research questions, informed by the literature and the pilot study, to assist the interviewer to gain consistency in content across all interviews without closing down new, unanticipated avenues of data (Sandelowski, 2000).

Individual interviews were conducted either face-to-face (n=7) or via telephone (n=13), the latter being necessary due to the vast geographical spread of participants. The interviews were conducted at a time and place of the participants’ choosing and included non-clinical locations in health facilities, on the university campus and in participants’ homes. Interviews were audio recorded and participants were informed that their interviews would be transcribed verbatim, de-identified and coded. The transcribed interviews and the codes ascribed to them were only available to the researcher and the supervisor team, and they were stored in password-protected files. Interviews varied in length from 21 minutes to 75 minutes.

Phase 2: Quantitative Data collection—Consensus Phase

Delphi study

The second phase of the research was a two-round electronic Delphi study. The aim of the Delphi study was to gain group consensus and content validation on practice standards and practice activities with ENPs (Chang et al., 2010). The Delphi technique is a group facilitation process where individuals’ judgments can be tapped and group opinions combined (Hasson, 2000) to address an incomplete state of knowledge (Powell, 2003). Hanafin (2004) described the classical Delphi as being characterised by five features: anonymity, iteration, controlled feedback, statistical group response and stability in responses among an expert-specific group. The Delphi technique as a methodology has been in use for 60 years and, in recent decades, it has seen rising popularity in healthcare research (Chang et al., 2010). It is considered a valuable research approach when the engagement of a large group of experts is appropriate for the study. It is also beneficial because each participant has an equal opportunity to have his or her individual views considered (Hanafin, 2004).

The benefit of using email for communication and assembly of data is that the responses are more legible than handwritten and are easier for data entry and enhanced communication tracking. Additionally, email is cheaper and faster; however, it could be affected due to technical difficulties and participants' expertise (Snyder-Halpern et al., as cited in Chang et al., 2010). The success of the Delphi technique in the pilot study verifies its usefulness for the national study with a large sample size.

The draft practice standards framework was developed from the findings of the qualitative study (O'Connell, Gardner & Coyer, in press). A Delphi questionnaire was developed from the framework for participants to score the statements according to their level of agreement.

Data collection and instrument

The study was conducted electronically between June and November 2013; the Delphi instrument was a modifiable Word document. Round one was distributed to consenting participants by email in June 2013, with a follow-up email sent three weeks later. The modified round two was similarly distributed in October 2013, with a follow-up email sent in early November. The ENP participants in the study were dispersed across Australia and all had access to, and were competent in the use of, electronic media.

Background information about ENP practice and the use of the Delphi technique was included at the front of the Delphi questionnaire. Explanations regarding the content and how it was developed were included to assist the ENPs to score statements based on their understanding of, and aspirations for, the ENP role nationally across all geographical and clinical settings, rather than based on their individual role and their local practice scope.

The Delphi instrument consisted of 19 pages with 3–5 items on each page and space for participants to comment on the item and the rationale for their score. The instrument consisted of practice standards with a number of practice activities qualifying each standard. All items were scored on a five-point Likert scale, with 1

being ‘strongly disagree’ and 5 being ‘strongly agree’. The instrument for round two of the Delphi study was modified slightly to reflect the feedback received from the participants. The second-round tool consisted of 13 practice standards with 35 associated practice activities to qualify the standards. See Appendix B for the round two Delphi questionnaire.

Sample and recruitment

As for phase one of the research, potential participants were invited to participate by invitation through the ACNP’s national conference in September 2012 and through the college website in October 2012 and agreed to be involved in either phase of the research study.

The participants in the Delphi study were all endorsed ENPs working in an established ENP role across a wide range of practice settings in Australia, from large metropolitan teaching hospitals to small rural sites. Participants’ ages ranged from 32 to 64 years of age, with 32 females and 13 males included in the initial sample of 45. The 30 participants who completed both rounds of the Delphi (female = 22, male = 8) came from a geographical spread of large metropolitan teaching hospitals (n=5), smaller metropolitan hospitals and large rural hospitals (n=12), and small rural sites (n=8), with 40 per cent stating that they worked across the ED and treated patients from all ATS categories.

Developed Practice Standards for Emergency Nurse Practitioners

Following the two-round Delphi study, the draft practice standards and feedback received from the participants were collated into the ENP Practice Standards final document (see Appendix C).

Ethical Considerations

The main ethical issues in this study were confidentiality and anonymity. The privacy of all participants in this research was protected by the principle of

confidentiality. The identity of the participants was known only to the researcher; data were de-identified by assigning a number, and individuals were de-identified on all working documents. Electronic communication sent to the Delphi group was 'blind copied' to protect participants' identities. To ensure anonymity was protected, all participants were fully informed of the details of the research, and consent to participate was freely given and informed. Participants were informed that they had the option of withdrawing from the research at any time without incurring any disadvantage. The ENPs involved in individual interviews chose the time and location for the interviews. All data sheets and any identifying documents were kept in locked storage, and data that were stored electronically were done so in a password-protected database. See Appendix D for the Participant Information and Consent Form.

The research reported in this thesis was approved by the Queensland University of Technology Human Research Ethics Committee in early October 2011 (approval number: 1100001216) (see Appendix E).

The research was conducted according to the NHMRC's (2007) standards for the ethical conduct of research.

The next phase of the study was to determine the theoretical framework that would be most suitable for the aims of the study and the methods to be used. In researching the practice of ENPs, it was important to not only get the right methods for the research, but also an appropriate theoretical framework. As previously described, NPs in Australia are deemed to be clinical experts; thus, in developing standards of practice for ENPs, it was appropriate to choose a theoretical framework that complemented their clinical status. Capability as the theoretical framework for this research study was considered a suitable approach.

Chapter 5: Theoretical Framework and Publication

Theoretical Framework

This chapter describes the theoretical framework used for this research. The literature review conducted to locate research into ENPs and competencies showed that there is a paucity of relevant research. It also showed that competency assessment and competency standards in their current forms are aimed at entry-level practice (Ebrall, 2007). There is a significant lack of theory-driven practice development for ENPs, with many competencies/standards showing scant inclusion of higher-level problem-solving and professional thinking. Existing competencies quantify tasks rather than the high-order integration of professional knowledge, which demonstrates context specificity (Ebrall, 2007).

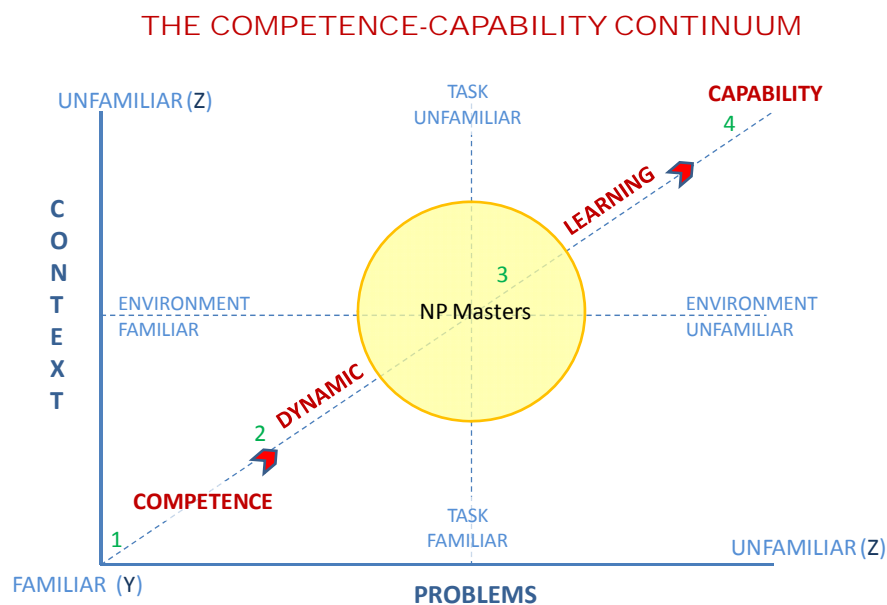
This section of the thesis was guided by research question three: How can competency standards designate advanced practice and differentiate the attributes from beginning level practice?

As there is a move within Australia from the descriptor ‘competency standards’ to ‘practice standards’ for NPs, there is an opportunity to broaden the concept of standards to accommodate the advanced practice of NPs through a capability framework (Cairns, 2000; Gardner et al., 2006) rather than developing a list of technical skills and procedures, which has proved restrictive to advanced practitioners in the past (Carrier et al., 2007; Lowe, 2010; Fotheringham et al., 2011). The erstwhile task-based competency lists are not relevant to higher-level practice, where the cognitive domain is utilised to problem-solve evolving clinical issues (Gurvis & Grey, 1995).

Capability is the theoretical framework that has informed this thesis. It has been described as the combination of skills, knowledge, values and self-esteem that enables individuals to manage change. A capable person can cope with the unknown, be adaptable, flexible and move beyond competency (Cairns, 2000). Leading

researchers into capability in healthcare have stated that traditional education and training in health disciplines concentrates mainly on developing competence (Fraser & Greenhalgh, 2001; Gardner et al., 2007). The research conducted for this study addresses this by adopting a capability framework to re-define the notion of practice standards and inform the development of ENP specialty clinical practice standards.

Figure 5.1 is an adaptation of the work from Stephenson and Weil (1992), Fraser and Greenhalgh (2001) and Biggs (2003). It describes the continuum from competence to capability as it applies to the role of the NP.



Adapted from Stephenson & Weil (1992), Fraser and Greenhalgh (2001) and Biggs (2003)

Figure 5.1: Competence Capability Continuum

Biggs's (2003) knowledge hierarchy model represents the learning process described in levels 1–4. Level 1 corresponds to the lower end of the continuum, where task and environment are familiar. This level corresponds to that of Stephenson and Weil (1992) as position 'Y' on the figure, where most people work most of the time—the familiar. This position often represents the simplest level of knowledge. Biggs (2003) described level 1 as 'declarative knowledge' (understanding the 'what'), level 2 is 'procedural knowledge' (understanding the 'how'), level 3 is 'conditional

knowledge' (assigns meaning to the 'what' and the 'how') and level 4 is 'functioning knowledge', which is a higher-order integration of the lower levels of knowledge and relates to the meaning of the findings and the indications of the findings when orientated to the complete event (Ebrall, 2007). Level 4 from Biggs's hierarchy corresponds to the higher end of the continuum, where 'situated cognition' (Durning et al., 2013) and 'context specificity' (Durning et al., 2011) are utilised in patient encounters and expertise is recognised (Fraser & Greenhalgh, 2001). As described by Biggs (2003), level 4 is consistent with position 'Z', which Stephenson and Weil (1992) described as the 'unfamiliar', where context and flexible thinking is required. This zone is consistent with Stephenson and Weil's definition of capability, which is characterised by: acquiring new knowledge and the ability to formulate and devise solutions in unfamiliar situations by trusting intuition, judgement, ability to solve problems and use acquired knowledge and skills in new ways (Stephenson & Weil, 1992).

The following publication, 'Beyond competencies: Using a capability framework in developing practice standards for advanced practice nursing' explicates the above figure in more detail.

**Publication: Beyond Competencies: Using a Capability Framework
in Developing Practice Standards for Advanced Practice Nursing**

Publication Status: accepted for publication

Journal of Advanced Nursing

Contribution of authors

This manuscript presents the concept of capability as a framework for advanced practice. The manuscript was written by J O'Connell and G Gardner with input from F Coyer.

Beyond competencies: using a capability framework in developing practice standards for advanced practice nursing

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Conflict of interest statement

No conflict of interest has been declared by the authors.

Funding statement

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

5.2.1 Abstract

Aim. This paper presents a discussion on the application of a capability framework for advanced practice nursing standards/competencies.

Background. There is acceptance that competencies are useful and necessary for definition and education of practice-based professions. Competencies have been described as appropriate for practice in stable environments with familiar problems. Increasingly competencies are being designed for use in the health sector for advanced practice such as the nurse practitioner role. Nurse practitioners work in environments and roles that are dynamic and unpredictable necessitating attributes and skills to practice at advanced and extended levels in both familiar and unfamiliar clinical situations. Capability has been described as the combination of skills, knowledge, values and self-esteem which enables individuals to manage change, be flexible and move beyond competency.

Design. A discussion paper exploring ‘capability’ as a framework for advanced nursing practice standards.

Data sources. Data were sourced from electronic databases as described in the background section.

Implications for Nursing. As advanced practice nursing becomes more established and formalised, novel ways of teaching and assessing the practice of experienced clinicians beyond competency are imperative for the changing context of health services.

Conclusion. Leading researchers into capability in health care state that traditional education and training in health disciplines concentrates mainly on developing competence. In order to ensure that health care delivery keeps pace with increasing demand and a continuously changing context there is a need to embrace capability as a framework for advanced practice and education.

Summary Statement

Why is this research or review needed?

- Competency standards are used extensively in healthcare, including nursing as benchmarks for entry to practice.
- Competency standards and competency assessments do not adequately address the advanced practice domain of experienced clinicians.
- As advanced practice nursing becomes more established and formalised, new ways of preparing clinicians and describing advanced practice are necessary.

What are the key findings?

- Competency standards are inadequate to address the expert practice of nurse practitioners
- Capability theory incorporates ‘context specificity’ and ‘situated cognition’ in the provision of complex health care as delivered by expert clinicians.
- Practice standards for advanced clinicians should be developed with flexible parameters enabling authentic representation of the real world of health care

How should the findings be used to influence policy/practice/research/education?

- Health service managers should adopt capability theory to enable expert clinicians to work to their level of expertise.
- Capability theory should be incorporated into graduate education aimed at non entry level clinicians.
- Future research should address the effectiveness of capability theory to enable expert clinicians to expand practice and measure clinical outcome on context specificity rather than a tick list of tasks.

Keywords; advanced practice, clinical competence, capability, situated cognition, context specificity, practice standards, dynamic practice, nurse practitioner.

5.1.2 Introduction

Competencies are widely used in vocational training and seen as a useful tool to design measurable industry standards for work practices (Keating, 1994). The early 1990's saw competencies adopted in nursing as benchmarks for competency-based education (Sutton & Arbon, 1994) and beginning level competencies were mandated in the regulatory framework for licence to practice (NMBA, 2006). In Australia (NMBA, 2006) and elsewhere (CNA 2005, NONPF 2012, RCNA 2012) competency standards are used in nursing by individual nurses to measure their own competence, by nurse regulatory authorities to determine suitability for licensure, by education providers to inform course curricula and by employers for position description development and performance assessment. Competency standards are also used in other health care professions such as medicine (MDANZ, 2010), pharmacy (PSA, 2010) physiotherapy (APC, 2006) and chiropractic (Ebrall, 2007). Competency standards are defined as agreed professional standards that are measurable allowing student behaviour to be observed and assessed whilst specific workplace tasks and roles are performed (Cairns, 2000). Whilst there is broad acknowledgment that competencies are useful and necessary for definition and education of practice-based professions there is also recognition that competencies are designed for practice in stable environments with familiar problems (Phelps *et al*, 2005).

In response to the increasingly complex environment of health service there is a move to development of advanced practice service in nursing and allied health disciplines. This paper will argue that competency standards are not sufficient to guide and define advanced practice. Furthermore the paper will draw on the emerging nurse practitioner role as a case study exemplar to propose a capability framework to support development of standards for advanced health care practice and education.

5.2.3 Background

Nurse practitioner service is being implemented internationally to improve timely access the health care across a range of contexts (Jennings *et al* 2008, AANP 2010, Fotheringham *et al* 2011). In Australia, achievement of specific competency/practice standards regulates entry to practice for nurse practitioners (ANMC 2006, NMBA, 2013). This is predominately achieved through successful completion of an accredited nurse practitioner master's degree. In the USA, the nurse practitioner title

is protected in legislation and credentialing requires masters' level education, although there is a move to doctoral level education for entry to practice (AANP, 2013). Similarly in Canada, the title is protected and entry to practice is completion of a recognised post graduate degree (CNA, 2009). The nurse practitioner title in the UK is not protected in legislation and educational preparation is varied (RCN, 2012).

Previous research (Gardner *et al* 2004, Gardner *et al* 2007) demonstrated that nurse practitioners work in environments and roles that are dynamic and unpredictable and draw upon attributes and skills to practice at advanced and extended levels in both familiar and unfamiliar clinical situations. The nurse practitioner role is still relatively new to the health service environment and in some settings and contexts the service is not fully understood or accepted (Carryer *et al*, 2007). Nurse practitioner practice is dynamic, often complex and evolving; requiring a practice framework that can link competency learning to practice complexity. Capability is a concept that has been proposed as a framework to broadly achieve this link (Fraser & Greenhalgh 2001, Ebral 2007) and for nurse practitioners development specifically (Gardner *et al* 2006, Gardner *et al* 2007).

Data sources

A systematic search of a defined body of literature was conducted. Electronic databases including Cumulative Index to Nursing and Allied Health, (CINAHL) Medline, Academic Search Elite, E-Journals, Educational Resources Information Centre (ERIC) and Professional Development Collection through EBSCOhost and also Google Scholar were the foundation for the search. Literature relating to 'competence', 'capability', 'advanced practice' and 'nurse practitioners' combinations and Boolean links were included. The reference lists of retrieved papers were scrutinized to identify other literature not identified in the original electronic search. All papers relating to the search terms were retrieved and appraised and collated into themes. The body of literature is discussed according to these themes

5.2.4 Competencies as a Learning Tool

It has been argued that competency standards are a constructive advancement that gives nursing professional status and enables nurses to identify their areas of practice

(Chiarella *et al*, 2007). Competence is also seen as an ambiguous notion (Gardner *et al*, 2007) and a nebulous genre that is defined in different ways by different people (Watson *et al*, 2002). There is also some concern in nursing that the use of the term 'competency' is associated with the Vocational Educational and Training sector (Chiarella *et al*, 2007) and jobs where a high level of critical thinking is not needed (Watson *et al*, 2002). Competency testing has been seen as specific to manual jobs where sets of skills particular to the job could be measured, rather than applying rigorous academic testing (Watson *et al*, 2002). An alternative view claims that competency standards are a necessary balance against an over intellectual approach to education and practice in nursing (Eraut, 1998). A systematic review of clinical competency standards (Giot, 2000) showed that there was agreement on the need for assessment of clinical nursing competence but cautioned that achieving reliability and validity of assessment of competency has not been fully addressed in the literature.

Competencies are deemed by many as necessary but represent a degree of simplicity; they tend to be prescriptive and are designed for a stable environment with familiar problems (Phelps *et al*, 2005). Most often designed in nursing for entry level to practice for undergraduate or new graduate nurses, they are usually broadly defined and open to interpretation depending upon the assessment context or model (EdCan, 2008). Ebrall (2007) describes a competency as the ability to perform a nominated skill and claims that competency statements are often narrow in their approach. In applying Biggs Hierarchy of Knowledge (Biggs, 2003), competency testing equates to the base level of 'declarative' and 'procedural' knowledge centred on knowing what to do when performing a skill.

Despite the lack of agreement on the utility of competencies in the nursing discipline, the use of competencies and clinical competency assessments has become central to nursing education and in some programs the move toward clinical skill development in nursing assessment has received greater emphasis than academic competence (Watson *et al*, 2002).

5.2.5 Beyond Competency

There is very little research or discussion in nursing competency literature that addresses the development of 'advanced' competencies that recognise complexity of

clinical practice at an advanced level. The seminal work of Gurvis and Grey (1995) tabled 'categories of competencies' in recognition of the need for competencies to reflect different domains of learning including 'advanced'. They described novice nurses as needing a large percentage of their competencies as psychomotor and task focused whereas expert level nurses who have mastered many of the psychomotor tasks need sophisticated competencies that take into account higher level knowledge and engage the 'cognitive domain' (Gurvis & Grey, 1995). Gurvis and Grey (1995) are unique in their approach to the development of competencies recognising categories of learning domains, the cognitive domain being the domain of higher level competencies for complex care. In Biggs hierarchy of knowledge (2003) this cognitive domain equates to the 'functioning' level of knowledge which includes the declarative knowledge base; the procedures and the skills to perform them and the relational understanding of context and critical analysis of the situation to give flexibility in the application of knowledge (Biggs, 2003).

As previously argued the advanced practice of licensed nurse practitioners is characterised by complexity. This necessitates a move from the procedural competency approach of the novice or beginner clinician to an education framework reflective of functioning knowledge, such as capability. Capability builds upon existing competencies as a continuum that embraces complexity as a mode of practice (Cairns 2000, Phelps *et al* 2005).

The core generic competencies designed for nurse practitioners in Australia and New Zealand (Gardner *et al* 2006, Carryer *et al* 2007) were informed by a capability framework and have been beneficial in explicating major domains of practice at an advanced level (Carryer *et al*, 2007) and supporting curricula development for nurse practitioner education (ANMC, 2006). However, the authors cautioned that the role of a capability framework for nurse practitioner competencies required further research particularly as the service model matured and became integrated into the health system (Gardner *et al*, 2004).

5.2.6 Capability - an innovative emphasis for advanced practice

Capability as a concept has been used in many business and educational contexts; Cairns and Stephenson (2009) suggest that broadly, capability "*is central to people*

being comfortable and able to cope in facing unfamiliar problems in unfamiliar situations” (pg. 5).

The term ‘capability’ is closely associated in common usage with the term ‘competency’. In recent years in the public sector workforce in Australia these labels have been used interchangeably and extensively (NSW Government, 2011) without recognising or clarifying fundamental distinctions.

The concept of capability in education emerged from the Royal Society of Arts UK initiative “Education for Capability” launched in 1978 and gained traction in Australia with the founding of the Australian Capability Network in 1996 (Cairns & Stephenson, 2009). Cairns and Stephenson (2009) describe common dictionary meanings of capability as ‘unused capacity’ or indicating ‘some potential ability’, the most constant meaning though appears to be ‘potential which may be utilised’ (pg. 3). The Australian Capability Network describes capability as the combination of skills, knowledge, values and self-esteem which enables individuals to handle change. The capable person can cope with the unknown, be adaptable, flexible and move beyond competency (Cairns & Stephenson, 2009). Capable people are described as:

- creative,
- have a high degree of self-efficacy,
- know how to learn,
- can take appropriate and effective action to formulate and solve problems,
- can apply competencies in unfamiliar as well as familiar situations,
- work well with others. (Cairns, 2000).

Capability is conceptualised by Stephenson and Weil (1992) as a continuum moving from the familiar to the unfamiliar. Familiar workplace problems and contexts are the sphere where most people operate for much of the time; familiar problems with familiar solutions. Moving towards less familiar context or problems, capable people rely on the ability to formulate and devise solutions in unfamiliar situations by trusting intuition, judgement, the ability to problem solve and by using acquired knowledge and skills in new ways.

Capability is a necessary part of specialist expertise and capable people continue to develop their specialist skills and knowledge long after they have left formal education. Having confidence in one's own ability and specialist expertise is fostered through successfully taking responsibility for one's education and reflexive interpretation of knowledge and skills (Stephenson & Weil, 1992).

5.2.7 Capability in advanced healthcare: A new direction for education and practice

Other health professions struggle with the use of competencies and competency assessment of practice for post graduates students and experienced practitioners. In Chiropractic education Ebrall (2007) argues that the competencies developed in Australia for chiropractic education are weak and represent the minimum standards required for entry level qualifications. He goes on to argue that graduates require something more than “blunt tools” and that graduate capabilities should be adopted to represent the practitioner/patient interaction in the context of individualised care. Medical educationalists have struggled with similar issues for many years with contemporary thinking that ‘competency assessment’ for graduates and expert doctors are not reflective of the complex nature of the individual patient episode of care (Durning et al, 2013). The ‘context specificity’ of any patient interaction with experienced practitioners pertains to the unique nature of the patient episode of care beyond the summative process that signifies the bulk of skill training for undergraduate students (Dijksterhuis et al, 2013; Durning et al, 2013). Context specificity refers to clinical reasoning, both diagnostic and therapeutic reasoning applied on a case -by- case situational basis to enable ‘wise’ action by selecting the best choices for treatment in a specific situation or context (Durning et al, 2011). Eraut (1998) describes this as ‘situated knowledge’, that is expertise and knowledge acquired over time through experience in the performance of a profession that enables the practitioner to interact with patients at a particular time and determine actions most appropriate for their situation. This is entirely different to novice practitioners following a step by step protocol and being measured on the performance of skills – the hallmark of competency and competency assessment (Eraut, 1998).

Durning et al (2011) discuss the contemporary theory of ‘situated cognition’- the complex interaction of a medical encounter, as one theory that can help to explain the

notion of context specificity. Situated cognition incorporates the components of ‘practitioner factors’, ‘patient factors’ and ‘encounter factors’ as impacting on the clinical outcome recognising the context specifics of each individual encounter (Durning et al, 2011).

Ginsburg et al (2010) highlight the tensions created by competency based education and competing interests for measurable, standardised outcomes on one hand and authentic representation of the everyday real world of health care on the other. Eraut (1998) discusses the need for capability as an extension to competence when the individual has developed higher levels of expertise and has moved beyond the static notion of competence that he describes as “*the ability to perform the tasks and roles required to the expected standards*” (pg. 135). The expected standards for attaining competency are the minimum standards or base level skills to practice safely (Cowan et al, 2007) and competency standards are the benchmark for beginning practice (Chiarella et al, 2008). McMullan et al (2003) discuss the confusion in the literature with the terms ‘competence’, ‘competency’, ‘capability’ and ‘performance’ being used interchangeably and inconsistently. However what is obvious from the literature is that ‘competency’ and ‘competency assessment’ in nursing are aimed at undergraduate students and beginning practitioners and the concepts of cognition and the context of practice of advanced practitioners are ignored in competency standards and assessments (Windsor et al, 2012; Chiarella et al, 2008; McMullan et al, 2003; Watson et al, 2002).

Eraut (1998) highlights the dichotomy between the local level of practice, determined by individual organisations and the development of local policies often in the form of task based competencies designed to meet the needs of the employers in reducing the legal liability of the organisation (Bail et al, 2009) and the professional qualifications negotiated at a national level where professional organisations expect individual nurses to make autonomous clinical decisions to their level of expertise (Bail et al, 2009). Windsor et al (2012) describe the notion of competency as nursing’s ‘soft skills’ that give scant focus to cognition and context of care. These soft skills may be linked to the notion of productivity where ‘competence might be preferred to excellence if it results in quicker, cheaper service’ (Eraut, 1994) and

where the determination of competence is situated in the employing institutions and local health authorities (Windsor et al, 2012; Bail et al, 2009).

Fraser and Greenhalgh ((2001) argue that traditional education and training in health disciplines concentrate mainly on developing competence and that there is a need to enable capability to ensure that health care delivery keeps pace with its continuously changing context. These authors frame capability as more than competence. Here competence is seen as “what individuals know or are able to do” and capability as the extent to which “individuals can adapt to change, generate new knowledge and continue to improve their performance” (pg. 799).

The focus of capability education is process; that is, supporting students to construct their own learning goals, receive feedback, reflect and consolidate. This is in contrast to goal oriented teaching that has rigid and prescriptive content often “checklist driven” and written for stable predictable situations (Fraser & Greenhalgh 2001, Phelps *et al* 2005). The notion of process techniques in learning is supported by Gardner *et al* (2006) in their research into nurse practitioner competency development that recognised capability as an alternative pathway for advanced practice learning, building on competencies but incorporating a rich variety of learning resources that allow for increasing complexity. The authors claimed that the education of nurse practitioners should embrace amongst other elements, concepts of adult learning principles and promotion of self-directed/lifelong learning skills (Gardner *et al*, 2006). However Gardner et als’ research did not address the gap between competency practice and capability learning.

Fraser and Greenhalgh (2001) proposed that when process techniques are used learning is driven by learner needs and is characterised by a dynamic and emergent personal learning plan with specific goals. Learning occurs in the ‘zone of complexity’ where relationships between items of knowledge are not predictable or linear. Learning for capability occurs when individuals engage with uncertainty and in an unfamiliar situation in a meaningful manner (Fraser & Greenhalgh, 2001). This is particularly true in changing contexts where capability involves the individual’s ability to solve problems by considering the situation as a whole; prioritising issues and integrating many different sources of data to make sense of the situation and arrive at a solution (Fraser & Greenhalgh, 2001).

This self-determined learning is continuous in capable people and described by Cairns as lifelong learning (2000). Self-directed learning occurs with capable people, enabling individuals to adapt to change, generate new knowledge and continue to improve their performance as continuous professional development (Fraser & Greenhalgh 2001, Phelps *et al*, 2005).

5.2.8 Implications for Nursing

The move from competencies to practice standards to define and guide nurse practitioner practice and education enables the development of theory driven standards that accommodate the complex and cognitive domain described by Gurvis and Grey (1995). This re-defines expectations of practice beyond a list procedural skills and tasks that are currently the mainstay of competencies and their assessment. By researching the practice domain of nurse practitioners and describing *how* they practice rather than a list of what they do (O'Connell *et al*, in press), theory driven practice standards will incorporate the cognitive domain of nurse practitioner advanced practice. The cognitive domain as described by Gurvis and Grey (1995) takes into account the capacity to master skills and tasks and incorporate effective thought processes and critical thinking particularly for complex situations. This cognitive domain matches the descriptors used by Cairns (2000) and Cairns and Stephenson (2009) to describe capable people.

Recent research into the practice parameters of emergency nurse practitioners (ENPs) has demonstrated a practice framework that includes conceptual themes related to modalities of practice (O'Connell *et al*, in press). These themes and the data that supports them are consistent with the descriptors of capable people as described by Cairns (2000) and demonstrates the potential for a capability framework in development of standards for advanced practice; See Table 1.

Table 1: Capability and ENP Conceptual Themes

Capability	ENP Conceptual Themes: Modes of Practice
Can take appropriate and effective action to formulate and solve problems	<i>Sorting</i> : bringing order to available information to assist in immediate evaluation <i>Troubleshooting</i> : problem solving
Can apply competencies in unfamiliar and familiar situations	<i>Troubleshooting</i> : problem-solving <i>Unravelling the encounter</i> : making sense of the presenting issues and symptoms to understand current problem
Mindfulness; awareness and openness to change	<i>Translation</i> : deciphering and analysing a multitude of individual patient issues into a diagnosis <i>Monitor and maintain</i> : reflecting on assessment findings to assist with care decisions and maintaining the patient's condition
Being able to engage with the social values relevant to actions	<i>Resolution</i> : making decisions from a holistic perspective for clinical action regarding discharge, referral, transfer or admission, encompassing options that are appropriate for individual patients
Works well with others (Cairns & Stephenson, 2009)	<i>Collaboration</i> : a resource for all staff and clinical 'hands on' across the whole department (O'Connell <i>et al</i> , in press)

As shown in the above table there are consistencies between the works of Cairns and Stephenson (2009) and O'Connell *et al* (in press) when looking at capability and advanced practice.

5.2.9 Conclusion

Competencies assess the stable, predictable situation and are predominately task–focussed; in nursing they concentrate on technical and procedural components. Conversely, capability incorporates the *process* of learning and practice as being adaptable to constantly changing environments and capable learners are seen as creative and flexible in their responses to a changing situation.

The development of practice standards for nurse practitioners requires a framework that supports advanced practice and actively involves the cognitive domain. Capability theory provides this framework through linking concepts, such as critical

thinking, managing unfamiliar clinical situations and adaptability, to guide the ongoing development of education for advanced practice roles.

Whilst there is a body of literature on capability, there is little research that supports capability as a theory to inform learning for complexity in health care, specifically in education for advanced practice. The capability framework enables research into nurse practitioner practice parameters that encompasses both the process and cognition of advanced practice and will further test the concepts of capability learning and practice to build on the existing body of work in this field.

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Chapter 6: Interpretive Research: Consultation Phase

Introduction and Context for Publication Three

The use of ‘capability’ as the theoretical framework combined with the research design created an agenda for the implementation of the research. The first phase of the national study was individual interviews with ENPs. This was the first phase of the exploratory mixed methods design and produced data that identified ENP practice parameters and facilitated the development of a draft ENP competency framework and the Delphi instrument.

Qualitative research is essentially an interpretive activity (Denzin & Lincoln, 2003). It situates the observer in the world of the phenomena being studied and consists of interpretive practices that make the phenomena visible to all by producing themes and constructs that makes sense of the data (Denzin & Lincoln, 2003).

Interpretive research is about finding meaning from peoples’ experiences of a particular phenomenon to achieve understanding, with the assumption that meaning is something created by individuals subject to a context (Denzin, 2001; Sandalowski & Leeman, 2012). In a practice-based discipline such as nursing, the application of the interpretive paradigm facilitates the investigation of clinical experiences and produces interpretive analysis that is able to inform clinical understanding (Thorne et al., 2004). Hence, the examination of clinicians’ experiences can reveal meaning, which can lead to the development of new knowledge of a specific phenomenon. Morse (2013) described interpretive methods as those that progress from description to theorising about what is being discovered within the data; that is, not just what is happening, but also what it denotes and how to explain the phenomenon under study.

The narratives from the interviews in this research were extensive and rich however the description of these data in the publication of this chapter is limited due to the requirements of publication word limits. Accordingly I have provided a Map of the interview narratives to the conceptual themes in Appendix F (see pg.

216). Selected narratives are used to demonstrate how the language and concepts within the data gave rise to the interpretive theory and the ‘Modes of Practice’ framework.

This chapter presents the manuscript that has been submitted and accepted for publication of the consultation phase of the research. The data from the interviews informed the interpretive framework and the development of the Delphi tool for the consensus phase of the research.

This phase of the research was guided by Research Question One: What are the parameters of practice for ENPs?

Contribution of authors

This manuscript presents the findings from individual interviews conducted by J O’Connell. J O’Connell analysed and interpreted the data under the supervision of G Gardner. J O’Connell and G Gardner wrote the manuscript with input from F Coyer.

Publication 3: Profiling Emergency Nurse Practitioner Service—An Interpretive Study

Publication status: accepted for publication

Advanced Emergency Nursing Journal

Jan 25, 2014

RE: AENJ-D-13-00042R1, entitled 'Profiling emergency nurse practitioner service—an interpretive study'

Dear Mrs O'Connell,

I am pleased to inform you that your work has now been accepted for publication in *Advanced Emergency Nursing Journal*. All manuscript materials will be forwarded immediately to the production staff for placement in an upcoming issue.

Thank you for submitting your interesting and important work to the journal.

With Kind Regards,

Dr Karen Sue Hoyt

Editor

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Acknowledgements

The authors would like to acknowledge the contribution of the emergency nurse practitioners who volunteered their time to participate in this study.

Conflict of interest statement

No conflict of interest has been declared by the authors.

Funding statement

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Abstract

The aim of this study was to investigate the practice profile of emergency nurse practitioners across Australia. Nurse practitioners have been providing health services in the emergency setting internationally for more than 30 years, and evidence supports the value of this role in terms of patient satisfaction, effectiveness in improving service indicators and acceptability of the role. The introduction of this service model has been instrumental in reducing waiting times for low-acuity patients and has positively affected emergency department service delivery. The recent rapid uptake of this role internationally has outpaced the development of the service model to inform education and ongoing service development.

This was a national study that used interpretive research methods to identify the practice profile of emergency nurse practitioners. Data were collected from December 2012 to February 2013 through in-depth interviews. An inductive approach was used in the data analysis to identify conceptual themes and develop an analysis framework. The study participants worked in a range of service models and managed patient presentations across all levels of acuity and complexity. The findings show that while there is no single, definable model of the emergency nurse practitioner role in Australia, there are practice features that are common across all service models. These have been conceptualised as Modes of Practice.

This study has produced new knowledge about the practice profile of emergency nurse practitioners. The findings will inform the development of practice standards for education and the continuing professional development of emergency nurse practitioners, and they will facilitate standardised operational definitions for ongoing research into this growing service model.

Keywords: emergency nurse practitioner, qualitative approaches, emergency department, health services research.

Introduction

Nurse practitioners (NPs) have been providing healthcare in the emergency setting for at least 30 years (Campo et al., 2008), and research supports the value of the role in terms of patient satisfaction, effectiveness in improving service indicators and acceptability of the role in the service team (Considine et al., 2006; Jennings et al., 2008; Fotheringham et al., 2011).

There are currently more than 1,000 endorsed NPs in Australia (NMBA, 2013), and over 30 per cent of these identify emergency as their specialist field of practice (Middleton et al., 2011). At the facility level, the development of the emergency nurse practitioner (ENP) role has been driven by service delivery gaps in emergency departments (EDs), particularly for patients presenting with minor injuries and illnesses (Considine et al., 2006). However, there are concerns that limiting ENPs to minor injuries and illnesses when they may be needed to care for higher-acuity patients (particularly in the rural setting) limits the use of their specialist skills and the full potential of the role (Haines & Critchley, 2009).

This research was conducted to explore the practice profile of a sample of Australian ENPs to inform the development of practice standards that reflect the full scope of specialty emergency practice at an advanced level.

Background

The increase in presentations to EDs has been reported internationally as exerting pressure on existing services. For example, in Australia in 2008–2009, ED presentations increased by 22 per cent from almost six million to more than seven million per year (DOHA, 2010). The Australian Institute of Health and Welfare (AIHW) reported that low-acuity presentations to EDs that are classified as potentially avoidable attendances account for approximately 38 per cent of all presentations to EDs nationally (AIHW, 2012). The rise in low-acuity presentations is reported as one reason for hospital bed block and increased waiting times for care (Considine et al., 2006; Jennings et al., 2008). The Australasian Triage Scale (ATS) is utilised in hospital-based emergency services to prioritise presenting patients

according to clinical urgency (ACEM, 2013). It is a five-point rating scale, with category 1 being immediate for resuscitation through to category 5 for non-urgent presentations (CENA, 2012). The timely management of low-acuity category 4 and 5 patients has been an impetus for the adoption of the ENP role (Considine et al., 2006; Jennings et al., 2008).

Specific service models have been established in Australian EDs to facilitate the management of low-acuity presentations. The most common of these is the fast-track model, whereby an area in the department is staffed to specifically manage low-acuity, minor-illness/injury patients (Considine et al., 2010). The introduction of fast-track areas, together with the increasing uptake of the ENP role, has been shown to reduce waiting times and positively influence service delivery for patients in ATS categories 3 to 5 (Jennings et al., 2008).

In the UK, the ENP role is primarily used to provide service for walk-in centres and minor-injury units (Mason et al., 2005; Fotheringham et al., 2011). Other advanced clinical roles, such as the emergency care practitioner and the acute-care nurse practitioner, have been established in UK emergency settings to manage more acute patients (Mason et al., 2005; Norris & Melby, 2006). Nurse practitioners who work in emergency care settings (ECSs) in the US are predominantly trained as family nurse practitioners or acute-care NPs (Ramirez et al., 2006). However, educational institutions are increasingly providing specialist ENP education, with seven programmes currently available nationally (ENA, 2013). To support these programs, the ENA in the US conducted a national Delphi study to determine entry-level competencies for ENPs (ENA, 2008). The study produced 60 entry-level competencies that defined a set of procedures and psychomotor tasks (ENA, 2008; Hoyt et al., 2010). The ENP role in the US covers a broad range of care and treatments for low-acuity and acutely ill patients, up to and including resuscitation and trauma (Cole & Ramirez, 2000). The American Nurse Credentialing Centre (ANCC), in recognition of the above research and the growth of the specialty, has recently introduced the Emergency Nurse Practitioner—Board Certified (ENP-BC) credential (ANCC, 2013).

The title of NP is legally protected in Australia, Ireland and most states in the US, and the requirement for entry to practice is masters or doctoral preparation (Irish Nurses Board, 2010; NMBA, 2011; AANP, 2013). In Australia, masters programs are based on agreed generic NP practice standards (ANMC, 2006), which provide a framework of skills and knowledge that are specific to the NP level of practice (NMBA, 2011). There is now increasing recognition that these generic standards need to be supplemented by standards that specifically support education and role development in specialty fields (O'Connell & Gardner, 2012; Hoyt et al., 2013). With the diversity of ENP service models reported in the literature, there is a need to gain an understanding of the practice of ENPs across all areas of practice and patient groups.

Study Method

Aim

This study was part of a larger, national mixed methods study that used an exploratory sequential design (Creswell & Plano Clark, 2011). The study objectives were to:

1. identify the practice profile of the ENP role
2. develop a framework for practice standards for ENP service
3. develop and validate standards for practice to inform service role development and specialty education for ENPs.

This paper addresses study objective 1 and reports on an interpretive study to identify the practice profile of the ENP role.

Design

The study used an interpretative research design. In a practice-based discipline such as nursing, the application of the interpretive paradigm facilitates the investigation of clinical experiences and produces findings that are able to inform clinical understanding (Thorne et al., 2004) and new knowledge of a specific phenomenon (Sandalowski & Leeman, 2012).

Participants

The study population comprised NPs in Australia who identified emergency care as their specialty field. A purposeful sampling approach was used, and the inclusion criteria were: 1) endorsement as an NP and 2) currently employed as a specialist ENP in an ED setting.

An invitation to participate in the study was distributed at the Australian College of Nurse Practitioners (ACNP) national conference in September 2012 and through the college's website in October 2012. Forty-six potential participants responded to the invitation. Of these, 20 participants were selected through stratified random sampling, using a table of random numbers, across jurisdictions proportional to the population size of ENPs in each state (see Table 1 for ENP study participants by jurisdiction).

Table 1: ENP Study Participants by Jurisdiction

State or Territory	Number
New South Wales and Australian Capital Territory	6
Queensland	6
Victoria	4
South Australia	2
Western Australia	2

Data Collection

Data were collected from December 2012 to February 2013 through individual interviews with consenting ENPs. A minimum data interview guide was developed, which was directed by the research questions and informed by the literature, to assist the interviewer to gain consistency in content across all interviews without closing down new, unanticipated avenues of data (see Table 2). The research questions that guided the interviews were:

1. What is the practice profile of ENP roles in Australia?
2. How do ENPs describe the practice activities they use in the care of patients presenting to emergency settings?

Table 2: Interview Guide

Minimum data interview Guide
<ul style="list-style-type: none">• Areas in the ED they mostly practice• Factors that influence and determine their practice scope• Activities of practice• Extent of NPs' influence in ongoing development of their role

Individual interviews were conducted either face-to-face (n=7) or via the telephone (n=13), with the latter being necessary due to the vast geographical spread of participants. The interviews were conducted at a time and place of the participants' choosing and included non-clinical locations in health facilities, on the university campus and in participants' homes. Interviews were audio recorded, and participants were informed that their interviews would be transcribed verbatim, de-identified and coded. Pseudonyms have been used in this report to protect the identity of the participants. The transcribed interviews and the codes ascribed to them were only available to the authors, and they were stored in password-protected files. Interviews varied in length from 21 minutes to 75 minutes.

Ethical Considerations

Ethical clearance for the study was gained from the relevant university Human Research Ethics Committee and was conducted according to the NHMRC standards for ethical conduct of research.

Data Analysis

An inductive approach was used to analyse the data in order to generate categories and explanations (Braun & Clarke, 2006; Patten, 2009). The first author examined and familiarised herself with the data and, using a systematic approach, coded the aggregated data into meaningful units. This coding was conducted through an

interrogative approach adapted from Silverman (1997) by asking three questions of each section of the data: 1) Does it address the research question? 2) What is happening? and 3) What is important? This produced an initial coding frame. These broad codes were organised into meaningful groups that were linked by common themes and patterns. The patterns within the data were then synthesised to identify the more abstract conceptual themes, which were further connected to produce categories of meaning.

This final step produced the interpretive framework, which provided the basis for knowledge development related to the ENP practice profile and to more clearly describe the ENP clinical and service potential. This process is consistent with Richards and Morse's (2013) assertion that the interpretation of themes refines the data into a broader meaning, which creates a new theory.

Validity

All three authors were involved in the analytical process. The study was designed by the first author—an ENP and PhD candidate—and the second author was the primary doctoral supervisor. The first author collected the data and conducted preliminary data analysis, while the second and third authors verified the analytical processes and outcomes. The second author is a PhD, Professor of Nursing and a recognised researcher in NP practice. The third author has a critical care background, is a PhD, Associate Professor of Nursing and the second doctoral supervisor. All steps in the coding, linking and synthesising of data were audited and checked by the co-authors.

Reflexivity

The first author is an ENP and therefore brought to this research pre-determined ideas and values related to ENP practice. Hence, to remain intellectually receptive to new ideas and knowledge related to the research questions, this author adopted measures to maintain an awareness of reactions, feelings and interpretations. Alvesson and Sköldberg (2000) maintained that reflexivity is necessary to allow the researcher to 'interpret their own interpretations'. This requires the researcher to reflect inwards to themselves and their social construct while also inductively


constructing the research findings (Sandelowski & Barroso, 2009). The first author maintained a reflective journal throughout the project, recording on a regular basis the work of data collection, coding and analysis, and her reactions, feelings and impressions about the data. Through this process, the first author gained insights and revelations that were not necessarily part of her initial assumptions (Jootun et al., 2009). This process also assisted in the audit trail of analysis and interpretation, thereby adding to the credibility of the findings (Walker et al., 2013).

Findings

There were 13 female and seven male participants, with a mean age of 44 years (range 32–64 years). The mean length of endorsement as an ENP was four years (range 0.5 to 9 years). The outcome from the analysis of the interview data shows that, while the context of practice for all participants was the emergency setting, the data confirmed that there is no single definable model of the ENP role in Australian EDs. The ENPs who participated in this study worked in a range of service models and managed patient presentations from all or selected categories of the ATS. Within this variability, a consistent trend in the data was the participants' focus on how they worked. While skills and procedures were discussed, the narratives went beyond a list of technical skills to descriptions of how clinical care was managed.

We have interpreted this approach to ENPs' management of clinical care as 'Modes of Practice'. That is, ENPs work across specific practice modalities as they attend to the needs of patients in their care, and these practice modalities apply to all patients at all levels of clinical urgency. The Modes of Practice are Rapid, Focused and Disposition. Across these three modes of practice was team collaboration. Each mode is developed and reported from linked conceptual themes (see Table 3).

Table 3: Interpretive Framework

Rapid Mode	Focused Mode	Disposition Mode
Sorting	Unravelling the encounter	Resolution
Troubleshooting	Translation	Packaging the patient
Relieve and restore	Monitor and maintain	
		

Rapid Mode of Practice

Rapid Mode is characterised by urgent attention and includes immediate actions ranging from life-threatening (e.g., resuscitation) to non-life-threatening (e.g., ‘see and treat’) presentations. The practices that characterise the Rapid Mode relate to: 1) bringing order to available information to assist in immediate evaluation; 2) problem-solving; and 3) addressing the urgent issue to achieve physiological stability and comfort. These are the conceptual themes of *sorting*, *troubleshooting* and *relieve and restore*.

6.1.1.1.1 Sorting

ENPs seek to bring order to the turmoil that is often a feature of the ED. In Rapid Mode, this was expressed by participants acting quickly to address urgent situations or being a ‘go-to’ person when there were delays or disruptions to patient care across the ED. The following narrative shows how Sara worked to help sort out the ED when it was ‘absolutely crazy’:

They’ll say, ‘we’ve got a trauma coming can you please come and “primary” that patient or can you just come and help’. There might be 15 patients waiting on trolleys and those patients may be waiting an hour, an hour and a half, and they’ll say ‘can you go and do assessments on those patients and fast-track them?’ I’ll do a rapid assessment, organise some interventions, some analgesia and get their management started; bloods, analgesia, X-rays, if it’s a patient that’s got a past history of renal failure, I’ll call renal and see if they’ll come down to see the patient just to try and make it a bit more efficient, more streamlined.

This narrative describes the activity of responding to urgent situations as part of the team. In this situation, Sara is the ‘go-to’ resource, providing rapid support for multiple situations. Collaboration is evident as Sara seamlessly responds to requests to lead, support and sort the pressure and confusion in the ED. Other participants

described similar scenarios and illustrated their ability to rapidly sort through treatment options, streamline care and sort the process of patient management.

6.1.1.1.2 Troubleshooting

Many of the participants' narratives related to situations in which they were simultaneously responding to a clinical event and picking up on unconnected clinical issues that required intervention and problem-solving. This process is illustrated in the following narrative from Cath:

There was a man who came in who was thrown from a horse and he landed on his head. One of the medical officers went to see that patient and I went to (another) patient. But a little while later as I walked past, I noticed the man who was thrown from the horse, in a collar, sitting up, still clothed with boots and stuff on. So I went in and even though the doctor was taking care of that patient I said 'come on we need to lay the patient down flat, we need to get him stripped, he needs to be lying flat', he said we can't get him flat because it hurts—I said 'well give him more morphine to get him flat' and 'you need to do a better neurological assessment, you've obviously not done a thorough neurological assessment because his boots are still on. I don't know how you can do a neurological assessment when he's still got his boots on'.

Cath's priority in this situation was to act to address the patient's urgent needs. In so doing, she was assertively working with her medical colleague by walking through the options and activities that needed to be addressed to meet the needs of the patient. This narrative reports activities that involved the participant acting quickly in response to minimal data.

6.1.1.1.3 Relieve and Restore

Relieving abnormalities such as an occluded airway, decreased oxygen saturation and circulatory compromise are a component of Rapid relieve and restore.

Participants reported how they contributed to the management and stabilisation of unstable patients, mostly within a collaborative team environment. The following narrative illustrates how the ENP role contributes to the work of the resuscitation team:

I think we have a very important role, in resuscitation, just because you're not working autonomously it doesn't mean that your role is less valued in fact if anything it's more valued because you have better oversight of the entire resuscitation. You know, you've been there before, the doctors prefer that because it gives them a sounding board as well for the management of the patient and having two seniors there makes everyone feel much more at ease. I would argue absolutely that the role of the ENP while it's not in the independent management of that patient in resuscitation; no one works as an independent clinician there, so I think that the ENP plays a very critical role within the team.

This narrative describes the nature of collaborative practice in resuscitation. The depiction is strongly about teamwork and the lack of hierarchy that brings a sense of calm to what is often a frenetic and crowded clinical site.

The data included examples of addressing an urgent issue that involved simple solutions such as relocating a dislocated digit or wound management. Participants reported how they intervened, often episodically, to order/administer analgesia for patients and how they were called upon by the emergency clinical team to provide timely care for patients with interventions that 'relieve and restore', as well as quickly intervening to keep the ED flowing:

Because we have people queued in the corridor—some of the nurses will come and ask me to write up, like pain relief in particular ... I always go and say hello to the patient, quickly assess them and see what their history is and then I'll write them up for analgesia.

According to the data, a large part of ENPs' working day involves responding to Rapid Mode situations such as analgesia and wound management by collaborating with the clinical team where the variable nature of ED work requires attention to

unpredictable patient presentations and varying patient loads across a wide range of clinical scenarios.

Focused Mode of Practice

Practice in the Focused Mode follows rapid interventions such as ordering/administering analgesia, where the ENP will return to conduct a more detailed assessment with the patient. This mode incorporates the initial and ongoing assessment of patients who do not require Rapid interventions and monitoring of the consequences of treatment for all treatments given. The conceptual themes in this mode are *unravelling the encounter*, *translation* and *monitor and maintain*.

6.1.1.1.4 Unravelling the Encounter

Patients attending ED have presenting problems such as abdominal pain or vomiting; but in situations of comorbid disease, current medications and the complexity of disease management isolating the immediate problem can be complicated. In the following narrative, Simon explains the need to be able to perform a clinical assessment as the foundation for unravelling the encounter:

You need to know how to do a head-to-toe physical examination and a good history because for you to prescribe and to order diagnostics, that's the foundation for everything. So I might see someone who's tachycardic and they're elderly and they've got abdominal pain, there could be a myriad of things going on there but the tachycardia still can't be ignored.

For Simon, practice in Focused Mode is about the ability to collect all of the data that could be required for good clinical reasoning and deductive logic, which will enable him to arrive at a conclusion. In the next narrative, Clare describes the strategies she uses to focus an assessment:

... getting a clear history, untangle it all, take out all the distracting stuff, document the history in some kind of reasonable fashion, work up your investigations, your impression, your diagnosis and whatever else you want to do and then get them (the patient) to where they need to be.

Both narratives emphasise the participants' work in unravelling or making sense of the information that patients bring to the encounter. This approach is essential to formulate and test hypotheses as they work their way through the patients' issues.

6.1.1.1.5 Translation

All participants emphasised that comprehensive clinical assessment and problem-solving was central to their practice. The translation activities were described as being part of a comprehensive assessment approach that extends the unravelling and testing logic of the previous theme. As one participant noted when discussing the issue of undifferentiated patients, '... patients don't come in with a nice neat diagnosis, we have to discover that'.

For many of the participants in this study, the translation of the assessment findings into a diagnosis is an evolving process that requires deciphering and analysing a multitude of individual patient issues. Translation is a seamless transition from the deductive logic activities of testing alternatives to diagnosis and clinical intervention.

6.1.1.1.6 Monitor and Maintain

Reflecting on assessment findings to assist with care decisions, as well as maintaining the patient's condition, is the continuation of the Focused Mode of practice. Formalising care plans and monitoring ongoing patient needs are determined in this mode. The participants talked of returning to monitor patients they had treated in the Rapid Mode, as illustrated in the following narratives:

I go back and review the patients and their response to treatment—particularly if I've ordered analgesia. Any bloods that I order I make sure I follow them up. Any diagnostics that I order, I follow them up to make sure that the low potassium gets replaced or the sodium. Every X-ray, every diagnostic I follow them up, to check outcomes and see that the bloods look OK.

These participants described a mode of practice that incorporates 'going back' and 'following up'. This clearly has a time element and indicates that for these

participants, there is synchronised management in responding to new presentations and the maintenance of cases in progress. In the following narrative, Andy describes his approach to monitoring:

I eyeball them to see how they're going and if they don't look like they're doing well and still look miserable then I go and formally review them, but generally I try and get them comfortable or do the appropriate management for that condition and then come back and do a review in an hour or two—whenever it's appropriate and then another formal review before I discharge people home—always. I never ever send someone home without seeing them myself.

The Focused Mode of practice incorporates a complete assessment, deciphering presenting data and reaching a preliminary diagnosis in a systematic way. This mode also incorporates the review of patients who have had interventions or whose clinical condition continues to evolve.

Disposition Mode of Practice

Disposition is the settlement of the ED episode of care, including ongoing treatment and/or the completion of care. It encompasses discharge, referral, transfer or admission. This mode may also incorporate decisions on withdrawal or withholding treatment in collaboration with the patient, family and members of the healthcare team. The two conceptual themes of Disposition Mode of practice are *resolution* and *packaging the patient*.

6.1.1.1.7 Resolution

Resolution is often about making decisions for clinical action early in the patient's episode of care. For Cate, resolution is an element of the initial patient encounter and subsequent management plans:

It's my responsibility to do a total assessment of the patient and determine a preliminary diagnosis. If it's within what I feel I can manage here, I'll treat and manage them onsite and discharge them, otherwise I'll liaise with the emergency specialist at (named) Hospital if it's a patient that needs to be transferred or retrieved.

In the contemporary ED environment, the timely resolution of the patient's presenting issues is a major consideration in the effective management of ED services. The role of the ENP in the fast-track service model has made a notable contribution to this service imperative, as indicated in the following narrative:

We've had such a great impact on service because we were seeing 10, 15 patients a shift so when we weren't there the place just fell over, waiting times went through the roof, flow went out the window. We were so valuable that the argument in our organisation was that if we weren't working in fast-track we weren't going to have that impact on waiting times and length of stay.

6.1.1.1.8 Packaging the Patient

The participants consistently described a holistic perspective and gathered into the disposition plan a range of options through established knowledge and contacts with available services. Packaging the patient is also about ensuring that patients have the ability and resources to manage their own interactions within the health system. Sara illustrates this in the following narrative:

I make sure they have their discharge plan in place, so they've got an analgesia regime or an antibiotic regime, they've either had their medications dispensed or I've written them a prescription. I normally write a letter to their GP (local doctor) and we have patient education leaflets so every patient that I see will get an information leaflet about their cellulitis or abdo pain etc. I make sure they've got a follow-up appointment arranged. Give them the opportunity to ask and answer any questions that they might have and just make sure that they're comfortable and aware of their plan and I make sure everything is written down because you can talk but they won't remember when they've been unwell or had analgesia so I'll make sure everything is written down. Another rule that I always use is that you've got to make sure that you've closed the loop, so that they've always got someone else that they can go back to.

Working in the Disposition Mode of practice for ENPs mostly involves safe patient discharge, but it also includes all aspects of concluding the patient encounter to achieve optimal benefits.

Discussion

This research demonstrated that the practice profile of ENPs is characterised in narratives from interview data by the concept of Modes of Practice; that is, the *way* of practicing rather than the *what* of practice. This approach is a departure from defining the ENP role by a suite of practice activities (ENA, 2008; Hoyt et al., 2010) or by a specific acuity level of the ED patient population (Considine et al., 2006; McConnell et al., 2013). Further, the experience of the research participants showed that a Modes of Practice framework for the ENP service is able to be applied across different ED patient acuity levels and service models. The participants in this study worked in a variety of metropolitan, rural and remote EDs. Some had roles specifically for minor injuries and illnesses, while others worked across all practice contexts. Nonetheless, the data consistently focused on processes of practice. This provides strong support for the application of this work to inform all models of ENP service.

There has been a trend to employ ENPs to address service issues such as improving waiting time and attention to minor-injury presentations (Jennings et al., 2008; McConnell et al., 2013). While this has proven effective for meeting short-term service indicators, it has not facilitated professional issues related to the ENP workforce. Fotheringham et al. (2011) extended Cooper's (2001) early work and examined how the role of the ENP has evolved in Scotland since the 2001 study, which showed that ENP work was focused exclusively on minor injuries/illnesses. They found that ENPs have broadened their practice since 2001, moving beyond minor injuries and illnesses to incorporate the care of more complex medical presentations.

These studies have provided information about the ENP role and its evolution. There is a distinction to be made between the implementation of a service delivery model that has grown out of individual site-specific needs as opposed to the development of

a comprehensive clinical service role that has the flexibility to be adapted to local needs. Fotheringham et al. (2011) and McConnell et al. (2012) made these distinctions when discussing the ENP role as a list of tasks performed following a protocol or guideline shaped by external bodies to nursing as opposed to a higher-level role developed by the profession where critical analytical skills play a major part in decision-making. In Australia, many of the ENP service models were implemented primarily through a need to change service delivery (Jennings et al., 2006; Considine et al., 2008) rather than in recognition of the advanced practice and autonomous nature of the NP role as determined by the profession. This may have affected the heterogeneous nature and at times limited the development of the ENP role in Australia. The findings in this research support and extend the work of Fotheringham and Cooper and provide a model for ENP practice standards that is comprehensive and relevant across the continuum of the complexity of patient presentations.

In the US, research has been conducted to establish the core competencies and skills of ENPs (Ramirez, 2006; ENA, 2008). The research addressed the evolving nature of the ENP role and centred on establishing the work patterns of ENPs (ENA, 2008). The Emergency Nurses Association (ENA) conducted research to discover and achieve consensus on the core knowledge, behaviours and skills required for entry to ENP practice (ENA, 2008). Through this process, the ENA developed a list of 60 competencies that cover aspects of care from resuscitation to discharge. The outcome of the ENA research provides, in part, a list of activities that could populate the Modes of Practice framework developed in this research. However, as Gurvis and Grey (1995) suggested, competencies aimed at advanced-level practice need to recognise the complexity of practice and reflect higher-level knowledge within the cognitive domain. The findings of the study reported here synthesise and analyse knowledge and practice to achieve a more comprehensive understanding of ENP practice than is achieved in the ENA scope and practice skills for ENPs. The application of a conceptual framework to a list of technical activities enhances the contribution that both studies make to providing guidance and structure to ENP practice and education on an international scale.

The Modes of Practice framework provides a conceptual model of how ENPs work across all levels of patient acuity. The Rapid, Focused and Disposition Modes of Practice describe a new way of conceptualising ENP practice, and this framework will inform educational requirements in addition to providing a foundation for the evolving role. This study also confirms findings from previous research into the generic role of the NP, which describes their practice as dynamic and involving the application of expert knowledge across a wide variety of situations (Gardner et al., 2004; Carryer et al., 2007).

The findings illustrate how ENPs work autonomously and collaboratively, as previously described by Gardner et al. (2004). While one hallmark of NP practice is professional autonomy with responsibility for the complete episode of care (Carryer et al., 2007), the majority of EDs work with a multi-disciplinary healthcare team. Even in remote settings, there are established networks that support ENP practice when the 'team' is remote from the ENP's service context.

Limitations

This interpretive study was conducted in Australia; thus, the findings will have been influenced by the cultural, policy and health service considerations that characterise this country's health system. Nonetheless, the sample was drawn from a range of geographical environments, and the conditions and populations in these settings will resonate with those in international settings.

Conclusion

In Australia and other countries, there has been some confusion about the practice parameters of ENPs. Previous research has shown that ENPs manage ambulatory and fast-track patients well and improve indicators around those patient groups. However, where the role has been implemented primarily to improve service delivery, the future progress and sustainability of the role professionally requires scrutiny. The development of a practice framework for ENPs that is derived from researching their practice will assist in formalising the ENP role and provide a framework for educational preparation and ongoing role expansion.

This interpretive study has uncovered diversity in the role and demonstrates that a broader role for ENPs is occurring across emergency services. This research provides the basis for studies into the influence of ENP services on patients across a range of acuity and complexity levels. Further, the research provides a framework for the ENP role and a basis for the development of practice standards.

With the increasing adoption of ENP services internationally, there is an opportunity for collaborative, cross-border research into ENP practice standards. The outcomes of collaborations between the ENA in the US and other international professional bodies and research teams would assist in providing a solid evidence base for ENP educational preparation, as well as the potential for a move towards international ENP practice standards.

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Chapter 7: Delphi Research: Consensus Phase

Introduction

This chapter presents the manuscript under review that describes the findings from a two-round national Delphi study to validate draft emergency NP practice standards. The Delphi study was the second phase, and therefore the consensus phase, of the mixed methods design. This phase followed the interpretive phase of data analysis from the 20 individual interviews, and the Delphi instrument was developed following the 'Modes of Practice' theory.

Mixed methods research of the exploratory sequential design has the second phase, the quantitative phase, build on the qualitative data collected in the first phase in order to measure the interpreted data. The second phase in this research, which was conducted to translate the qualitative data into measurable items, saw the added strand of instrument development as a component of the data measurement. The translation of the data and the instrument development of the Delphi questionnaire occurred in this consensus phase.

The Delphi questionnaire was a new instrument developed for the second phase from the interpretive framework from the first-phase data. Along with the instrument development, the quantitative phase also sought to ensure the content validity of the questionnaire, along with the validity of the instrument as a tool designed to measure what it was designed to measure (Patten, 2009).

Statistical analysis during the consensus phase incorporated mean scores (M) and standard deviations (SD) for each item on the questionnaire, and content validity was measured by calculating the content validity ratio (CVR) for each item and the content validity index (CVI), which is the mean of all items on the questionnaire. The measurement and analysis of the content and validity of the questionnaire answered question 2, which was guiding this phase of the national study: *What are*

the extended-practice clinical and professional skills and attributes for ENP practice?

All items on the questionnaire were scored by the cohort of ENPs as appropriate, with some items overlapping but no suggestions of missing skills or attributes. The findings from the Delphi study were positive, and the instrument that became the Emergency Nurse Practitioner Clinical Practice Standards (see Appendix C) achieved a high degree of validation from the participants, as discussed in the following publication.

Contribution of authors

This manuscript presents the results of a Delphi study conceived and conducted by J O'Connell under the supervision of G Gardner. The manuscript was written by J O'Connell and G Gardner with input from F Coyer.

**Publication 4: A National Delphi Study to Develop and Validate
Emergency Nurse Practitioner Practice Standards**

Publication Status: under review

International Journal of Nursing Studies

A National Delphi Study to develop and validate emergency nurse practitioner
practice standards

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Conflict of interest statement

The authors declare no conflicts of interest.

Funding statement

This research received no funding from any agency in the public, commercial or not-for-profit sectors.

Acknowledgements

The authors would like to acknowledge and thank the Australian ENPs who volunteered their time to participate in this research.

Abstract

The aim of this study was to develop and validate specialty clinical practice standards to provide a framework for education and ongoing role advancement for emergency nurse practitioners (ENPs). A national Delphi study was conducted over two rounds between June and November 2013 to achieve content validation of specialty clinical practice standards for Australian ENPs. All items on a questionnaire were scored on a five-point Likert scale. Forty-eight items constituted the final questionnaire, and all items reached the 80 per cent consensus, which was determined prior to the study. This study produced new knowledge about the practice of ENPs, and the specialty practice standards will inform educational requirements and role development.

Keywords: emergency nurse practitioner, practice standards, Delphi study.

Background

The nurse practitioner (NP) role is an internationally established advanced practice role (Duffield, Gardner, Chang & Catling-Paull, 2009) that was formally first described in the US in 1967 (Silver, Ford & Steady, 1967). Since then, the role has been introduced globally to provide an augmented pathway to healthcare in an overstretched health service environment (Sheer & Wong, 2008). The NP role has improved access to health services (Jennings et al., 2008) and, in some situations, it provides the only face-to-face health provider in remote or underserved populations (Harvey, Driscoll & Keyzer, 2011).

There are currently around 1,000 endorsed NPs across Australia (NMBA, 2013a). The uptake of the role since the initial endorsement process was introduced in 2000 is testament to its positive effect on the provision of health services (Lowe, 2010). The largest specialty group of NPs in Australia comprises those who describe their practice as emergency care (Middleton, Gardner, Gardner & Della, 2011). The ENP role has been adopted as a service improvement strategy to enable timely access to care, particularly for low-acuity presentations that historically wait the longest for treatment (Jennings et al., 2008). Australian emergency departments (EDs) utilise the

Australasian Triage Scale (ATS) to assign urgency ratings for presenting patients, with category 1 being resuscitation-type patients, who must receive treatment within two minutes, through to category 5 patients, who are classified as non-urgent (CENA, 2012). Many of the ENP roles implemented in Australia target ambulatory patients, particularly ATS category 4 and 5 (O'Connell & Gardner, 2012; Jennings et al., 2008).

Internationally, the ENP role has varied service models. In the UK, ENP service is primarily designed for the patient population presenting with minor injury/illnesses. (McConnell, Slevin & McIlfatrick, 2013). In Canada, models are being developed where ENPs are involved in the care of patients across all triage categories (Steiner et al., 2009), and the role in the US similarly encompasses a broad range of interventions and care from ambulatory patients through to resuscitation and trauma situations (ENA, 2008).

There is variability in educational preparation for the NP role. The NP title in the UK is not protected by legislation; consequently, there is no standardised approach to educational preparation. The Royal College of Nursing (RCN) has accredited more than 20 programs for NPs, mostly at the post-graduate award level of BSc (Hons) up to the masters level (AANPE, 2012). The education and training of ENPs in the UK ranges from in-house training to post-graduate degrees (McConnell et al., 2013) with Marr et al. (2003) describing in-house training as the most common for ENPs. McConnell et al. (2013) stated that the development of the ENP role in the UK has been determined mostly by stakeholders' needs and external factors beyond the control of ENPs.

There has been an international move to develop practice competencies and standards to inform NP education. In Canada, there are generic competencies for NPs, but no specific ENP standards (CNA, 2010). In the US, where the majority of NPs working in emergency care are certified family or adult NPs, there has been a recent development for ENP certification (Hoyt, Ramirez & Proehl, 2013). This progress has been a logical consequence of the research conducted by the Emergency Nurses Association (ENA) (ENA,2008) on the development of competencies for

nurse practitioners in emergency care and the recognition that they have specialty educational needs (Hoyt, Ramirez & Proehl, 2013).

The criteria for endorsement as a NP in Australia is built upon the national generic competency standards released by the Australian Nursing and Midwifery Council (ANMC) in 2006 (ANMC, 2006). These practice standards, which were updated in 2013, continue to provide criteria for the endorsement and continuing professional development of NPs (NMBA, 2013b). The standards are also used by the Nursing and Midwifery Board of Australia (NMBA) to assess the ongoing competence of NPs, as well as to convey to the public the standard they can expect from a NP (ANMC, 2006). They are also used to inform university curricula development (ANMC, 2006) and course accreditation (ANMC, 2009). However, no specialty NP clinical practice standards have been developed within Australia to guide educational needs and the development of the role professionally. Practice parameters for the role of the ENP are determined at the local level by the specific service needs of the health facility. This leads to inconsistencies when attempting to articulate the role, as well as in educational preparation of the ENP.

Delphi Technique

The aim of a Delphi study is to draw upon the collective wisdom of a defined group to develop or validate a tool for use in a specific field (Chang, Gardner, Duffield & Ramis, 2010; Powell, 2003). The participants in a Delphi study should be experts and credible in their field, and they should be interested in the topic and willing to participate throughout the study (Chang et al., 2010). Hasson, Keeney and McKenna (2000) stated that if the participants are likely to be affected directly by the decisions to be made, then they are more likely to want to be involved in the study. The Delphi technique is an iterative process that uses a series of questionnaires interspersed with controlled feedback (McKenna, 1994). Each stage of the process builds on the results of the previous stage and reflects the participants' own views back to them in such a way that they can proceed with the next stage (McKenna, 1994). Individual participants' responses are anonymous, and only the group mean is revealed to each participant (Keeney, Hasson & McKenna, 2006; McKenna, 1994). In this study, the principal researcher was not blind to the individual participants. This conforms to

Dillman, Smyth and Christian's (2009) premise that being able to identify participants assists the researcher in conducting feedback and follow-up.

McKenna (1994) described a modified technique called the 'reactive Delphi', in which participants respond to previously prepared information rather than generating the data themselves. Providing participants with pre-existing information can assist the research process by reducing the amount of data that may be poorly defined and ambiguous (Chang et al., 2010).

Data collection processes have changed over time, and with the primary global communication medium now being the Internet (Donohue, Stollefson & Tennant, 2012), the use of electronic media to conduct research has become rapidly accepted (Day & Bobeva, 2005). With a large expert panel, the use of e-mail to enhance communication-tracking and the legibility of responses is advantageous, user-friendly and time-efficient (Chang et al., 2010).

Strengths and Weaknesses of the Delphi Technique

The Delphi technique has been criticised by some in the scientific community as lacking methodological rigour because there are no universal guidelines on its usage (Hasson et al., 2000). The lack of universal guidelines for the Delphi is evident through discussions in the literature (Keeney et al., 2006). Criteria such as the number of participants, the number of rounds conducted and the agreement on consensus primarily depends on the aim and objectives of the study being conducted and the available resources of both time and money (Powell, 2003; Keeney et al., 2006; McKenna, 1994). There is also criticism of the possibility of poor response rates, particularly in the final round of a Delphi study, due to 'response exhaustion', reduced feelings of being a partner in the study and lack of interest (Keeney et al., 2006; Powell, 2003). A poor response rate can also be attributed to a lack of accountability through anonymity (Powell, 2003).

However, the Delphi technique is considered valuable for certain research studies due to its flexibility (Hasson et al., 2000; Powell, 2003). It is most valuable when the achievement of consensus among a large group of 'experts' on the subject being

studied is required (McKenna, 1994). It is described as an efficient, quick and cost-effective way of achieving group consensus where there is insufficient information or no existing information on a certain issue (Keeney et al., 2006; Hasson et al., 2000). The Delphi technique is particularly useful when the sample is geographically dispersed, as the data are collected from a series of questionnaires that are distributed to the individuals without the need to meet face-to-face (McKenna, 1994; Keeney et al., 2006). This technique allows for the anonymity of participants' responses to others in the group, and it reduces the possibility of powerful individuals dominating opinion while still facilitating the collection of expert opinions on a subject (Powell, 2003).

The Delphi Panel

The selection of the panel follows criteria that determine the participants as experts within the field being studied (Hasson et al., 2000; Keeney et al., 2006). Purposive sampling enables the researcher to identify the population to be included in the study based upon the criteria of the specific study (Palys, 2008). Panel size is variable and based upon the availability of experts who fit the inclusion criteria, but obviously the larger the group size, the greater the generation of data, and the larger the group, the greater the reliability of a composite judgement (Hasson et al., 2000; Powell, 2003). If the subject group of experts is small and possibly known to the researcher, there is a risk of bias, which may affect responses from the group (Powell, 2003). However, with a specialised field of study, this may be unavoidable, as individuals are likely to know each other and the researcher. Conversely, this could have a positive effect by increasing participants' interest and perceptions of being partners and stakeholders in the study (Keeney et al., 2006).

The Study

Aim

The aim of this research was to achieve content validity for specialty clinical practice standards through consensus from an expert group of consenting ENPs.

Design

This study was the second phase of a national mixed methods project that used an exploratory sequential design (Creswell & Plano Clark, 2011). The aim of the larger study was to investigate the parameters of practice of ENPs to develop and validate specialist practice standards, and it was directed by the following objectives:

1. to identify the parameters of practice and the practice profile of the ENP role
2. to develop a framework for clinical practice standards for ENP service
3. to refine and validate standards for practice to inform service role development and specialty education for ENPs.

This paper addresses study objective three and reports on a two-round electronic Delphi study. The aim of the Delphi study was to gain consensus and content validation on practice standards and practice activities with ENPs.

The draft practice standards framework was developed from the findings of phases one and two—the qualitative study (O’Connell, Gardner & Coyer, in press). A Delphi questionnaire was developed from the framework for participants to score the statements according to their level of agreement.

Participants

The second national census of NPs in Australia, which was conducted in 2009 (Middleton et al., 2011), showed that 30 per cent of authorised NPs identified their specialty as emergency. Recruitment for the national study commenced in September 2012, when the number of endorsed NPs across Australia was 736 (NMBA, 2012). There were more than 200 endorsed ENPs in Australia when the study commenced. The recruitment of participants was conducted through the Australian College of Nurse Practitioners (ACNP) national conference in September 2012 and through an invitation to participate that was posted on the ACNP’s website in October 2012. The eligibility criteria were: being an endorsed NP with emergency as their designated specialty, and currently working in an established ENP role.

A sample of 45 ENPs consented to participate in the study. Participants were free to withdraw from the study at any time, and confidentiality within the sample was assured, with all participants assigned a code number and responses identified only by the code number. Codes and responses were only available to the principal researcher, and they were kept in password-protected computer files.

Data Collection and Instrument

The study was conducted electronically, with a modifiable Word document, from June to November 2013. Round one was emailed in June 2013, and a follow-up email was sent three weeks later. The modified round two was emailed in October 2013, with a follow-up email three weeks later. The ENP participants in the study were dispersed across Australia, and all had access to, and were competent in, the use of electronic media.

The Delphi tool consisted of 19 pages with 3–5 items on each page and space for participants to comment on the item and the rationale for their score. The tool consisted of practice standards, with a number of practice activities qualifying each standard. All items were scored on a five-point Likert scale, with 1 being ‘strongly disagree’ and 5 being ‘strongly agree’ (see Table 1).

Background information and assumptions about ENP practice were included at the front of the Delphi questionnaire. Explanations regarding the content and how it was developed were included to assist the ENPs to score statements based upon their understanding of, and aspirations for, the ENP role nationally across all geographical and clinical settings rather than based on their individual role and their local practice scope.

Table 1: Item Example of Practice Standards for ENP Delphi Tool

	1 = Strongly disagree 2 = Disagree 3 = Neither agree nor disagree 4 = Agree 5 = Strongly agree
<u>Practice Standard</u> Rapid Mode 1. Performs an initial <u>assessment</u> of the emergency care patient rapidly identifying the nature and characteristics of urgent care needs. Comments:	1-----2-----3-----4-----5

The Practice Standards and Practice Activities are structured around Modes of Practice as the conceptual model. The Modes of Practice are *Rapid*, *Focused* and *Disposition*, which were the major categories identified in phase one, as follows:

- *Rapid Mode* is characterised by urgent attention. This traditionally relates to cases of high clinical urgency such as ATS Category 1 or 2. Rapid Mode describes ENP practice that includes immediate actions to respond to urgent presentations of both life-threatening and non-life-threatening. This ranges from resuscitation activities to urgent needs of a lower acuity, such as wound management, relocation of a dislocated digit or analgesia. The practices that characterise the Rapid Mode relate to: 1) bringing order to available information to assist in immediate evaluation; 2) problem-solving; and 3) addressing the urgent issue to achieve physiological stability. Practice in this mode is often team-based, but it also requires autonomous practice in treating individual patients or groups of patients. As a modality of practice, the Rapid

Mode is relevant to clinical urgency across all ATS categories. The Rapid Mode has five practice standards and 19 practice activities.

- *Focused Mode*: Episodes of care by the ENP often commence in the Focused Mode, when the patient may not need rapid interventions. This mode incorporates a complete assessment, deciphering presenting data and reaching a preliminary diagnosis in a systematic way. This Mode of Practice also includes the review of patients that have already had diagnostic and treatment interventions or whose clinical condition continues to evolve. Ongoing assessment of the patient and monitoring the consequences of treatment occur in this mode. The Focused Mode has five practice standards and 11 practice activities.
- *Disposition Mode* relates to the arrangements and actions to be taken regarding ongoing treatment and/or the completion of care for all ED patients. It encompasses discharge, referral, transfer or admission, and it represents the settlement of the ED episode of care. The ENP Mode of Practice for disposition incorporates the analysis of clinical assessment findings and individual patient requirements for ongoing treatment. This mode also includes decisions made regarding withdrawal or withholding treatment in collaboration with the patient, family and members of the multidisciplinary team. The *Disposition Mode* has three practice standards and five practice activities.

Ethics

All participants gave informed consent to participate, and ethical clearance for the study was gained from the relevant university Human Research Ethics Committee. The study was conducted according to the NHMRC (2007) standards for the ethical conduct of research.

Data Analysis

The level of consensus for each item on the questionnaire for this study was agreed among the researchers prior to data collection at 80 per cent. This level determined the inclusion or exclusion of draft practice standards and practice activities in the

document. Data were entered into an Excel spreadsheet for each round separately. The mean score (M) for each item was measured, and the total mean was calculated for each round to determine central tendency. Variability between the scored items was measured by standard deviation, with the standard deviation (SD) calculated for each item. Content validity for the questionnaire was measured by calculating the CVR of each item on the tool and then calculating the CVI, which is the mean of all items (Ehlers, 2002). Content validity reflects the degree to which an instrument and the individual items constitute the relevance of the tool through expert assessment (Polit & Beck, 2006). The CVR for each item was calculated from the participants' scoring of each item of 4 or 5 on the Likert scale. The scale for the interpretation of the CVI ranges from 0 to 1.00, with the overall content validity being higher if the value is closer to 0.99 (Ehlers, 2002). The tool used in this study achieved a CVI of 0.967.

Results

The participants in the Delphi study were all endorsed ENPs working in an established ENP role across a wide range of practice settings in Australia, from large metropolitan teaching hospitals to small rural sites. Participants' ages ranged from 32 to 64 years of age, with 32 females and 13 males included in the initial sample of 45. The 30 participants (female = 22, male = 8) who completed both rounds of the Delphi came from a geographical spread of large metropolitan teaching hospitals (n=5), smaller metropolitan hospitals and large rural hospitals (n=12), and small rural sites (n=8), with 40 per cent stating that they worked across the ED treating patients from all ATS categories.

Round 1

In round one, 45 questionnaires were sent out electronically, and there was a 71 per cent response rate (n=32). There were 57 items on the questionnaire in round one, comprising 16 practice standards and 41 practice activities. All but two of the items were scored above the pre-determined consensus cut-off of 80 per cent. The two items that scored below the 80 per cent consensus mark pertained to *resuscitation airway management* (78 per cent, M 3.88, SD 1.39) and *resuscitation medication*

ordering (76 per cent, M 3.78, SD 1.41). The items were reworded for round two based on many participants' positive feedback that they should be amended but still included in round two.

The total mean score for all items in round one was 4.58 (92 per cent). The standard deviation for items in round one ranged from 0.24 to 1.41.

Round 2

The round two questionnaire consisted of 48 items, incorporating 13 practice standards and 35 practice activities. A different number of items from the round one questionnaire reflected the amendments made to the document based on participants' feedback and further data analysis. Round two was sent out to the 30 participants who responded to round one, excluding two participants who were unable to participate in round two. There was an 83 per cent response rate (n=25) in the second round. All items in round two scored above the 80 per cent consensus level, with all but two items scoring above 90 per cent consensus.

The total mean score for all items in round two was 4.86 (97 per cent). The standard deviation for round two items ranged from 0 to 1.12. The lowest scoring items—those under 90 per cent consensus—pertained to *resuscitation medication ordering* (89 per cent, M 4.46, SD 1.12) and *clearance of cervical spine* (89 per cent, M 4.46, SD 1.08). With the rewording of the item from round one pertaining to *resuscitation airway management*, the round two score was 95 per cent (M 4.75, SD 0.52).

The lowest-scoring items from round one were reworded to remove specific activities from the statements that the participants were uncomfortable with, such as specifying the airway adjunct; *endotracheal tube* and *intubation drugs*. The improved scoring in round two reflects participants' comfort with not stating certain activities (see Table 2).

Table 2: Lowest Scores for Round One and Changes in Round Two

Round 1	%	M	SD
Rapid Mode 2: activity (A) Clears and secures patients' airway using positioning, suctioning and airway adjuncts such as Oropharyngeal/ Nasopharyngeal airway, supraglottic airway or endotracheal tube as appropriate	78	3.88	1.39
Rapid Mode 2: activity (H) Orders appropriate medications for treatment of ABC abnormalities, such as adrenaline, intubation drugs and fluid resuscitation, and is knowledgeable in all possible routes of delivery of drugs	76	3.78	1.41
Round 2	%	M	SD
Rapid Mode 2: activity (A) Ensures patency of patients' airway using positioning, suctioning and airway adjuncts as appropriate	95	4.75	0.52
Rapid Mode 2: activity (E) Orders appropriate medications for treatment of ABCDE abnormalities and is knowledgeable in all possible routes of delivery of drugs/therapy	89	4.46	1.12

The final outcome of the Delphi study was over 80 per cent consensus agreement on all items included in the specialty clinical practice standards for ENPs. These practice standards and practice activities constitute the final ENP specialty practice standards document (see Table 3 for the practice standards).

Table 3: ENP Practice Standards Framework

<u>Rapid Mode:</u> Practice Standards	<u>Focused Mode</u> Practice Standards	<u>Disposition Mode</u> Practice Standards
<p><i>Rapid Mode 1</i> Performs an initial <u>assessment</u> of the emergency care patient, rapidly identifying the nature and characteristics of urgent care needs.</p> <p>Includes six practice activities</p>	<p><i>Focused Mode 1</i> Performs comprehensive head-to-toe <u>assessment</u>, incorporating all systems on any patient that requires it, such as taking into account presenting complaint, mechanism of injury and past medical history.</p> <p>Includes two practice activities</p>	<p><i>Disposition Mode 1</i> Collates assessment data that contribute to accurate conclusions regarding the ongoing needs and disposition of the emergency care patient.</p> <p>Includes two practice activities</p>
<p><i>Rapid Mode 2</i> Determines the required urgent care <u>intervention(s)</u> related to airway, breathing, circulation, disability and exposure in the unstable patient and performs or facilitates the required urgent intervention in collaboration with the multidisciplinary team.</p> <p>Includes seven practice activities</p>	<p><i>Focused Mode 2</i> Determines and orders appropriate <u>investigations</u> based on the focused assessment findings.</p> <p>Includes two practice activities</p>	<p><i>Disposition Mode 2</i> Refers appropriately for ongoing safe and judicious care in collaboration with the MDT when necessary.</p> <p>Includes three practice activities</p>
<p><i>Rapid Mode 3</i> Orders appropriate <u>diagnostic</u> investigations for the emergency care patient and interprets results.</p> <p>Includes three practice activities</p>	<p><i>Focused Mode 3</i> Formulates a preliminary <u>diagnosis</u>, including differential diagnoses.</p> <p>Includes zero practice activities</p>	<p><i>Disposition Mode 3</i> When care is withheld or withdrawn, the ENP works as part of the multidisciplinary team to support the patient, family and colleagues.</p> <p>Includes zero practice activities</p>
<p><i>Rapid Mode 4</i> <u>Prescribes/facilitates</u> appropriate pharmacological and non-pharmacological therapy for resuscitation and rapid care across all ATS categories.</p> <p>Includes zero practice activities</p>	<p><i>Focused Mode 4</i> Determines and orders/conducts appropriate <u>treatments</u> and procedures based on the focused assessment findings.</p> <p>Includes four practice activities</p>	

<p><i>Rapid Mode 5</i> Reviews interventions and diagnostics from Rapid Mode situations and evaluates findings for restitution while providing ongoing care.</p> <p>Includes three practice activities</p>	<p><i>Focused Mode 5</i> Monitors the response to administered therapy using acquired data and any ongoing information, such as diagnostic results and observations.</p> <p>Includes three practice activities</p>	
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Discussion

The development of specialty practice standards applicable to NPs has been described internationally, but there has been no research conducted to guide ENPs in Australia on the specialty standards of practice and education. The Australian nationally recognised generic NP competencies (ANMC, 2006) are still a broad sweep of the role and do not address specialty-specific educational and ongoing development needs of ENPs.

The development of practice standards for advanced-practice nurses requires an understanding of the components that are necessary to write statements that reflect higher-level knowledge and the cognitive domain of advanced practice (Gurvis & Grey, 1995). Standards need to be measurable and to consider or reflect the complexity of practice and describe one behaviour in each statement (NACNS, 2010). To this end, the developed practice standards for ENPs from this research reflect the clinical component of their practice and reflect the complexity and diversity of the clinical practice of ENPs across Australia.

The use of a ‘reactive Delphi’ as described by McKenna (1994), where participants are asked to respond to a list of previously prepared statements rather than create the list in an unstructured way, was appropriate for the Delphi study in this research because it constituted one part of a larger mixed methods research study. The statements for the Delphi questionnaire were determined in phases one and two of the mixed methods study. This considerably reduced the time and content input required of the Delphi participants and, by collecting data from ENPs in the

qualitative phase of the larger study, there was surety that experts in the ENP role were included in both arms of the study.

The Delphi participants were given an opportunity to make individual open-ended comments regarding the pre-existing statements to give them an avenue to express their views on statements that they may agree with in principle but wanted issues added, deleted or reworded. The comment section of each item also facilitated participants to give a rationale for their scoring—in particular, when they did not agree with the statements, it gave all participants an equal opportunity to have their opinions considered (Hanafin, 2004). In round one, the few participants who did not agree with the statements pertaining to resuscitation had scored them the lowest mainly because their practice as an ENP did not incorporate resuscitation.

Local practice scope agreements in some ENP models do not recognise the role of the ENP in resuscitation situations, as their roles are focused on fast-track and ambulatory patients; however, many participants—particularly those based in small metropolitan and rural sites—stated that resuscitation-type standards are fundamental to ENP practice. The re-wording of the practice standards and practice activities does not exclude these activities. While many hospitals instituted the ENP role in recognition of the autonomous nature of the role (Gardner, Carryer, Dunn & Gardner, 2004), which enabled minor presentations to be treated by ENPs without the requirement for medical consultation, most ENPs work in a collaborative health team that facilitates team-based care for patients. Hence, ENPs work in close collaboration with a multidisciplinary team, either within ED or within a larger network. This research has demonstrated the varied nature of ENP practice across EDs and all ATS categories as determined by patient and service needs. While most ENPs do not manage resuscitation and high-acuity presentations as the primary clinician, their involvement in the assessment and stabilisation of any patient presentation is warranted and expected in many EDs.

This research has demonstrated that the function of the ENP in Australia incorporates a diverse range of roles; it is broader than that of quarantining ENPs in fast-track models. As described in Canada (Steiner et al., 2009) and by Fotheringham, Dickie and Cooper (2011), regarding the role of the ENP, there are broader roles than that of minor injuries/illnesses. The use of these expert nurses across the ED has either

evolved out of need (Fotheringham et al., 2011) or been instituted to improve service and flow for the whole ED population (Steiner et al., 2009). Drummond (2007) described the role of the ENP in Canada as evolving, stating that the role depended upon many variables, but often the nature of the ED determined the role. He further stated that the ENP should add some value to the whole ED, recognising that NPs' expertise can be used for a wider variety of patient presentations than just minor presentations, as this is not the patient group that causes ED overcrowding. Haines and Critchley (2009) stated that in the rural setting, the perception that ENPs are only utilised for the treatment of minor injuries/illnesses is a barrier to the introduction of the role. Further, in rural areas where there is limited access to emergency physicians, the most experienced nurses, including NPs, are needed for high-acuity patients (Haines & Critchley, 2009).

The findings from this research demonstrate that the role of the ENP in Australia is broader than has been portrayed in the literature as that of minor injuries/illnesses and running fast-track streams, even though the outcomes of ENPs treating these discrete groups of patients has been overwhelmingly positive (Considine et al., 2006; Jennings et al., 2008). Other roles existing across Australia represent more expansive responsibility, as dictated by individual service needs.

The role of the ENP in Australia commenced in metropolitan hospitals, mostly with ambulatory patients and where individuals were responsible for initiating the roles. However, as this research has shown and as overseas literature has described, the ENP role is evolutionary. To hold that minor presentations are the only patients suitable for ENP care overlooks the expert level of practice of NPs, the continual growth of individuals, the diversity of practice settings and the service needs of the ED patient population. For ENPs already working in a defined practice scope, the practice standards will enable them to up-skill or re-skill to expand their practice. In EDs where there is an ambition to employ more ENPs as more become endorsed, the practice standards will enable a structured framework to facilitate expansion. The development of clinical practice standards for ENPs will enable the progress of the role and the continued development of the individual ENP through a structured framework of educational activities. The practice standards will also provide a

structured approach for curricula development for specialty-specific clinical education as components of existing educational programs.

This research involved participants from a wide sample of practice settings and from diverse ENP models. However, all participants agreed that this research would assist them by explicating the diversity of ENP roles and the development of a framework with some homogeneity for the ongoing progression of the role.

Limitations

This study was conducted in Australia, so the findings may not be directly transferable internationally. However, the findings should be of interest to countries where the ENP role has similarities to Australian practice and where the role warrants clarification.

Conclusion

All participants in this national study agreed with the concept of developing specialty ENP practice standards and were constructive in their participation and feedback. The findings from this research support the development of specialty clinical practice standards for ENPs.

The specialty clinical practice standards for ENPs will guide educational needs for aspiring ENPs and ongoing professional development needs for endorsed ENPs, and they will provide clarity about the practice of ENPs. There is also potential—particularly with the uptake of e-Delphi studies—to conduct collaborative international research on the practice of ENPs.

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Chapter 8: Discussion and Recommendations

Introduction

The development of specialty competencies/practice standards for NPs has been reported in the international literature, but there has been no research conducted in Australia on ENPs and specialty clinical standards of practice to provide a framework for education and continuing professional development. The Australian generic NP standards of practice (NMBA, 2013^a) are a broad sweep of the role and do not address specialty-specific educational and ongoing development needs of ENPs or other specialities, although they address aspects of the professional role of the ENP and will continue to contribute to the explication of the role. This body of research has addressed the specialty clinical domain of the practice of ENPs and has delivered a validated suite of clinical practice standards. The research involved participants from a wide national sample of practice settings and from diverse ENP models. The participants involved in this research described a range of ENP roles, and the data analysis directed the development of a framework with some homogeneity for the ongoing progression of the role. The findings from this research also have applicability for an international audience where the ENP role continues to evolve.

This research was guided by three questions:

1. What are the parameters of practice for ENPs?
2. What are the extended-practice clinical and professional skills and attributes for ENP practice?
3. How can competency standards designate advanced practice and differentiate the attributes from entry-level practice?

This chapter will address each question in turn.

Parameters of ENP Practice

This research has delineated the parameters of practice for ENPs and shown that the practice is broad and diverse. It has provided new knowledge about ENP service and its capacity for care delivery beyond that of fast-track or minor presentations. The ‘Modes of Practice’ framework describes *how* ENPs work rather than *what* they do. ENPs work across all ‘Modes of Practice’—*Rapid*, *Focused* and *Disposition*—and with patients from all ATS categories. These findings are a major departure from defining the ENP role by a suite of practice activities (ENA, 2008; Hoyt et al., 2010) or by a specific acuity level of the ED patient population (Considine et al., 2006^a; McConnell et al., 2013). The experience of the research participants has shown that a ‘Modes of Practice’ framework for ENP service is able to be applied across different ED patient acuity levels and service models. Importantly, the framework provided information for the development of a practice standards tool that populated the fields of the Delphi instrument and subsequent ENP specialty clinical practice standards.

In Australia, many of the ENP service models were implemented primarily through a need to improve service delivery (Considine et al., 2006^b ; Jennings et al., 2008) rather than in recognition of the potential for improving patient care with the autonomous nature of the role and the advanced practice of the NP as determined by the profession. This may have affected the heterogeneous nature and at times limited the development of the ENP role in Australia. The most commonly described ENP role in the literature in Australia and elsewhere is that of ‘minor injuries and illnesses’ (Jennings et al., 2008; Lowe, 2010; Wilson et al., 2009). Previous research has demonstrated the positive effect of ENPs on service indicators in fast-track models and treating low-acuity patients (Considine et al., 2006^a; Jennings et al., 2008; Wilson et al., 2009). Prior to this, no research has been conducted internationally that has described the practice of the ENP as a senior clinician delivering care across the full range of ED presentation.

The ENPs demonstrated practice in both collaborative and autonomous situations. The collaborative nature of ENP practice in the care of high-acuity patients has received scant attention, and service delivery has focused narrowly on patients that

other healthcare professionals feel comfortable in allowing ENPs to treat without input from doctors (Li et al., 2013). However, this research has shown that ENPs deliver complex care across all ATS categories in autonomous and collaborative practice. This offers new ways of thinking about staffing EDs by drawing on ENP teams rather than the erstwhile employment of one or two individuals. Considine and Fielding (2010) discussed issues related to the sustainability of NP service and claimed that the achievement of full integration and ongoing sustainability of the role occurs where best-fit service delivery and ongoing workforce development are key requirements.

In Australia, candidates for entry to a NP masters course are expected to have advanced practice in their clinical specialty prior to commencing the program (NMBA, 2010). Requirements for endorsement as a NP also state that, even with the completion of a master's degree, the candidate is expected to demonstrate the equivalent of three years of full-time experience in an advanced practice nursing role within the past six years (NMBA, 2011^b). These requirements denote that endorsed NPs are considered advanced-practice nurses and specialists in their practice areas. In the field of emergency care, this is emphasised by the specialty professional organisation, College of Emergency Nursing Australasia (CENA), which describes an ENP as 'an expert in the field of emergency health care ... practicing at an advanced level ... providing clinical leadership' (CENA, 2008, pp. 2–3).

In the US and Canada, where NP titles and certification categories are population-based rather than specialty-based (ANCC, 2013), many of those who have been employed to work in EDs do not have an emergency/critical care clinical background, hence the need for internships and controlled practice with predominantly primary care patients (Cole & Ramirez, 2000; Hart & Macnee, 2007). Some graduates of NP masters programs in the US have not worked in nursing at all; their undergraduate degree being in another discipline (Hart & Macnee, 2007; Campo et al., 2008). In the UK, where the title is not protected in legislation and is therefore difficult to regulate, ENP service grew out of a need to fill gaps left in the emergency workforce when new laws were introduced in 2004 regarding the reduction in junior doctors' working hours (GMC, 2013). Senior nurses were considered appropriate to fill the gap in staffing, as many had worked for extended

periods in the Accident & Emergency (A&E) setting. Minor presentations being treated by nurses meant that the reduced roster of doctors could concentrate on sicker patient presentations (Hoskins, 2011). The establishment of ENP roles in the UK and the US has been haphazard, with differing service needs, political imperatives and preparation for the role different than in Australia; however, there are similarities in the clinical environments of EDs. The differences in the educational background of candidates and the regulation of the NP title in Australia mandates that the adoption of ENP models from the UK or North America as suitable for the Australian healthcare environment is ill-considered. However, the development of the ENP clinical practice standards from this research will clarify the potential of the role, and previous international research conducted into the practice of ENPs may be strengthened by the 'Modes of Practice' framework revealed in this research.

Other specialty groups of NPs are regarded as experts in their clinical specialty and treat patients across the illness spectrum (Douglas & Bonner, 2011). Emergency nurse practitioners are the only group of NPs whose majority has been limited to care for patients at the lower end of the acuity scale and treat simple and quick presentations. The research for this thesis has demonstrated that ENP models in Australia embrace a broad role, particularly in EDs with non-ED specialist medical staff or reduced numbers of senior doctors. The 'Modes of Practice' framework developed in this research can inform new approaches to research that refocus the testing of ENP service outcomes beyond those related to service indicators, to those related to a broader, more flexible and complex role.

Extended-practice Clinical and Professional Skills and Attributes of ENP Practice

The Emergency Nurse Practitioner Clinical Practices Standards (see Appendix C) represent new knowledge regarding the nature of ENP practice and will guide the nursing profession in the ongoing development of the ENP role. The ENP practice standards represent a new way of conceptualising descriptions of clinical practice and recognise the flexibility needed in advanced-practice roles, particularly with a clinical population as diverse as ED patients. The draft practice standards from the

qualitative phase were modified, accepted and validated with data from the ENP participants in the Delphi study to establish the ENP Clinical Practices Standards.

The establishment of the ENP role in Australia saw the practice of individual ENPs controlled by the mandate to work within the bounds of Clinical Practice Guidelines (CPGs) written by the individual ENP to address specific clinical presentations (Lowe, 2010). These guidelines required sign-off from multidisciplinary teams consisting of individuals and professional groups outside of the nursing profession that were often informed by rhetoric and political dictates (Considine & Fielding, 2010). By defining ENP practice scope by CPGs for particular presentations, the flexibility and progression of the role was reduced (Lowe, 2010). The constrictive requirement of CPGs had a profound effect on the implementation of the ENP role as a homogenous professional position and is contrary to the notion of autonomy, capability and flexibility that was evident in this research.

This requirement for CPGs has decreased now, and reliance on practice scope documents and individual credentialing of skills is currently required in many jurisdictions. However, there is still a notion of control regarding the ENP role, which is characterised by a lack of understanding of, and confidence in, the role by many professional groups (Weiland et al., 2010). Health managers often cite ‘quality and safety’ as a reason for the tight control of the implementation of NP roles (Considine & Fielding, 2010). As stated by Bail et al. (2009), ‘the discourse of hospital procedural policy situates the nurse as obedient to organisational requirements by limiting practice to a performance of actions without explicit recognition of professional autonomy’ (Bail et al., 2009, p. 1457).

There is a need to move away from guidelines, competencies and practice scope documents that determine the ENP role as a list of tasks and procedures and that are based on narrow perceptions of the role or by adapting overseas research to fit local service. Nursing literature supports the notion that CPGs and other forms of controlling protocols have proved inflexible and unreasonable, and therefore risk reducing the full potential of the role (Carryer et al., 2007; Bail et al., 2009; Lowe, 2010). This exploratory study has developed national research-based practice

standards that can guide individuals and health services in the implementation of the ENP role.

Fotheringham et al.'s (2011) work, which studied the evolution of the ENP role in Scotland, stated that the role has evolved beyond minor injuries, with a small number of ENPs treating sicker medical presentations due to service demands and acceptance of the role. They further stated that ENP work in Scotland is controlled by protocol-driven care and, in some cases, the expansion of the role means simply adding more tasks to their practice (Fotheringham et al., 2011). There is a balance between progressing the profession of nursing to incorporate advanced-practice concepts that embrace the complexity of care, such as critical thinking and advanced decision-making skills, with providing service needs within an available workforce, which often involves task allocation for the health service's purpose (Fotheringham et al., 2011; McConnell et al., 2013). At some sites in Australia, the move to employ more ENPs as the number of endorsed NPs grows is not enacted when the role is perceived by major stakeholders to be narrow and expensive (Haines & Critchley, 2009; Weiland et al., 2010).

This research has demonstrated that the role of the ENP in Australia is beyond that of task allocation, and that the specialist practice of ENPs is applied across all 'Modes of Practice' and ATS categories. The development of a skill or task list to delineate ENP practice, which occurred with the research conducted by the ENA (2008) in the US, is inappropriate for ENPs in Australia, whose practice has been shown to be diverse and flexible to meet the clinical demands of ED patient care. The data collected for this research corroborate the multiplicity of expert practice that the ENPs describe as beyond that of just completing allocated tasks.

The ENP clinical practice standards developed in this research will facilitate a clearer understanding of the role and its future potential, and it will assist those ENPs and services with further expansion of the role.

Competency Standards: Differentiating Advanced from Entry-level Practice

The move from the language of ‘competency standards’ to ‘standards for practice’ requires that standards for practice as developed for advanced practitioners should reflect the cognition of the practitioner and the complexity of the clinical encounter beyond a list of tick-box tasks or workplace policies (Durning et al., 2010; Windsor et al., 2012).

The updated Australian generic NP standards for practice, which were published by the NMBA in late 2013 (NMBA, 2013^a), are described as ‘... the minimum standards applicable across diverse practice settings and patients populations ...’ (NMBA, 2013^a, p. 1). The rationale provided (NMBA, 2013^b) for removing the term ‘competency’ from the revised standards was not derived from research evidence rather it drew upon Chiarella et al.’s (2008) assertion that confusion exists between the use of the term ‘competency-based assessment’ in the Vocational Education and Training sector and the use of ‘competency’ in other settings. Further, there has been no indication that the revised standards were developed from research knowledge, further attesting to the notion that the change is a semantic one and not theoretically determined.

The development of standards above base-level skills synonymous with competency requires a different approach from the NMBA model described above. According to Dijksterhuis et al. (2013), Durning et al. (2011) and Eraut (1998), standards that are appropriate for the expert level need to incorporate the concepts of context specificity, situated cognition and evidence of capability such as a critical, flexible approach to the patient encounter. Rather than observations of performance, Eraut (1998) described accounts of practice as the difference between competence and capability—the ‘how’ of practice being context-specific, including a critical approach, a flexible mind and situated cognition (Eraut, 1998; Durning et al., 2013).

The Australian generic NP standards for practice are described as minimum standards for entry to practice; a term that correlates with Eraut’s (1998) description

of ‘competencies’. Yet the cohort that is entering practice as NPs are not novice nurses but experts in their clinical field; the notion of minimum standards in this case is contradictory in that NPs require education, assessment and standards that reflect the complex nature of their work and their experiential knowledge (McMullen et al., 2003).

Generic competencies are considered broad and vague (Watson et al., 2002). A lack of context specificity (Eraut, 1998; Durning et al., 2013) is one reason why generic competencies or generic standards for practice are not appropriate for specialist NPs as sole standards. These generic standards cover professional aspects of the NP role, but there is a requirement for specialty clinical content that explicates the complex clinical practice of NPs. Therefore, the development of specialty-specific clinical standards of practice presents the opportunity to augment broad generic standards.

The development of practice standards incorporating a capability framework recognises flexibility, autonomy of practice and responsiveness to changing clinical situations (Carrier et al., 2007). This research, which has incorporated capability theory, has enabled practice standards to be developed for ENPs, characterising the flexibility and cognitive processes that are lacking in competency standards (Cairns, 2000). The ‘Modes of Practice’ articulate the cognitive domain (Gurvis & Grey, 1994) and situated cognition (Durning et al., 2013) inherent in advanced practice that incorporates capability theory. This innovative approach differentiates the findings from this research from that of ‘competency standards’ as depicted by task or skill performance (Cairns, 2000). Using capability theory, this research has demonstrated new knowledge, a new way of conceptualising descriptions of ENP practice and an approach that may have relevance to other areas of advanced practice.

The research into parameters of practice and the subsequent development of the ENP Specialty Clinical Practice Standards has demonstrated that ENPs work at a level above that of task allocation and display attributes of capability within their practice. The research has demonstrated that these clinicians are flexible in their practice and use existing competencies in novel ways in clinical practice. According to capability theory, in this regard, they move beyond the performance of tasks to the cognitive level, which enables them to make decisions about the clinical interventions required,

incorporating critical thinking and advanced decision-making skills (Gurvis & Grey, 1994). They demonstrate more than the 'how' of performing a task; they incorporate the 'why' and 'what else'. The ENP Specialty Clinical Practice Standards have been developed within a capability framework to incorporate the flexibility required for advanced practice across the ED, moving away from specific competency assessment 'tasks' or a skill list, to a conceptual reflection of ENP practice. While tasks and procedures are elements of competency, advanced professional practice is about understanding the reasoning behind the tasks and the deeper knowledge required for capable performance. Establishing specialty practice standards for ENPs requires recognition of professional academic knowledge as well as the clinical skills (Lowe, 2010; Hoskins, 2011).

The research conducted in the US to compile competencies for ENPs comprised a list of the most commonly performed skills, procedures and behaviours (ENA, 2008). This large, national study was informative and supportive of the development of ENP-specific 'treatment' competencies. With scant inclusion of higher-level problem-solving and professional thinking, the competencies quantify a task rather than the high-order integration of professional knowledge that demonstrates context specificity (Ebrall, 2007). The findings from this research and the US competencies will be of mutual benefit, with each informing the other's work. The practice framework from this research may be populated with some of the practice skills and tasks from the US research to consolidate their body of work.

The 'Modes of Practice' describe how ENPs work across all ATS categories, regardless of the service model, by using troubleshooting and critical thinking to provide appropriate and timely emergency care. Internationally, this approach to defining and describing ENPs has not previously been attempted. Further, collaborative international research regarding the 'how' of ENP practice could significantly affect the consistency of education and clinical performance for the role.

The developed 'Emergency Nurse Practitioner specialist clinical practice standards' from this research, which incorporates the framework of 'capability', will enable ENPs to qualify their clinical domain by overlaying the developed specialty

standards on the generic Australian NP standards for practice. This will give a richer, more precise representation of the advanced practice of ENPs and the educational requirements to prepare the next generation of ENPs.

Recommendations

Currently in Australia, the clinical education for ENP candidates is *ad hoc* and driven by local beliefs or service requirements. This inhibits a standardised educational experience and limits students to educational preparation that may not be transferable to different ED models post-endorsement.

Recommendation 1: *It is recommended that universities incorporate the findings from this research into masters courses for NPs, particularly the Professional Experience Placement, for specialty learning in emergency and related clinical fields once tested for effectiveness as an educational tool.*

NPs are required to fulfil specific ongoing ‘continuous professional development’ for their endorsement to continue. As more ENPs become endorsed and employed, there is a need to progress roles and the individual ENPs’ preparation for any variations in practice scope.

Recommendation 2: *It is recommended that individual ENPs incorporate the findings from this research into their practice as appropriate, and use the developed Specialty Clinical Practice Standards as a framework for their continuing education once tested for effectiveness as an educational tool.*

As emergency nurse practice service expands, health service planners will require a framework to enable appropriate progress and service planning to meet the broad needs of consumers.

Recommendation 3: *It is recommended that health service planners employ the potential of the ENP role and translate the findings from this research into new and evolving models of ENP service.*

This research was conducted across Australia but has resonance with the international development of the ENP role.

Recommendation 4: *It is recommended that further research be conducted at both the national and international levels to test the application of this research on the ongoing development of the ENP role. Further, collaborative international research should be conducted to augment these and previous research findings.*

Dissemination plan for the study findings

These research findings will translate to a package of information regarding the ENP practice standards and guides to use. This information will be disseminated to key stakeholders, including the Australian Nursing and Midwifery Council, the Nursing and Midwifery Board of Australia, the Australian College of Nurse Practitioners and various universities to assist with curricula development for NP masters programs. Wider dissemination will be achieved through links to the publications. The packages will include a cover letter explaining the research, links to the publications and a professionally designed ENP Practice Standards document containing a preamble that explains the practice domains of ENPs and the finalised standards document.

Summary

This research has been the first undertaken into the development of specialty clinical practice standards for any group of NPs in Australia. It will inform research on specialty clinical practice standards for other areas of NP practice. The ENP specialty clinical practice standards may be applicable to other specialty practice beyond EDs, where a diversity of patient presentations is common. The practice standards are also relevant beyond Australia, where the role of the ENP continues to progress internationally and where common areas in practice are identified.

The research undertaken for this thesis has demonstrated that the ENP role is broader than that of ‘minor injuries and illnesses’, which is commonly implemented in Australian EDs. The findings have demonstrated that at many sites, the service model is driven by the use of ENPs as advanced expert emergency nurses to manage episodes of care for patient presentations across the ATS. This broader role also

encompasses the mentoring and support of more junior clinical staff—most often in a collaborative situation such as resuscitation and urgent interventions for a deteriorating patient. As stated by Weiland et al. (2010), Haines and Critchley (2009) and Drummond and Bingley (2003), the use of ENPs to treat only minor-acuity presentations in many EDs represents inefficient use of the most experienced nurses, who could be better used in the care of the sickest patients and across the ED.

The diversity of ENP roles in Australia will continue based on individual health service requirements and local practice scope deliberations. However, the development of practice standards will give an overarching framework for the ongoing progress and expansion of the ENP role, and it will inform educational requirements for future students and the ongoing professional development of existing ENPs. Specialty-specific ENP clinical practice standards provide a framework for the clinical practice placement component of masters courses, as well as a framework for ongoing professional development and continuing progress of the ENP role to ensure sustainability of the role and professional satisfaction from role growth.

The national research conducted for this thesis was thorough and involved ENPs nationally in the development of specialty clinical practice standards. These standards give the profession an insight into the broad practice of ENPs and will guide individual institutions in relation to the potential for role expansion.

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Appendix A: Minimum Data Interview Guide

Interview prompts

- In which sections of the ED do you work?
 - triage categories
 - specialties
 - anywhere outside ED
- What factors determined your practice scope?
- What do you do?
- What do you not do?
- How do you maintain currency for practice?
 - (self-directed, mandatory, formal courses)
- Ongoing role development decision-making in evolving their role within ED (reconfiguring business plan/case)
- Other parameters of the role
 - leadership
 - professional issues
 - education (of others) as clinical resource/expert
 - research—non-clinical time

Appendix B: Round Two Delphi Questionnaire

An exploratory study for the development of Emergency Nurse Practitioner specialist competency standards

Delphi Study Round 2

This material is work in progress for my PhD. Please treat this document confidentially and do not share with others.

The items for this Round 2 Delphi questionnaire have been compiled initially from interviews conducted nationally with ENPs from Dec 2012 to Feb 2013 and subsequently amended in response to the data from Delphi Round 1. This is a nationwide study that incorporated a broad spread of ED practice contexts, including large metropolitan teaching hospitals, smaller outer metropolitan hospitals, and rural and remote hospital/health sites.

When completing this questionnaire, please base your scores on your understanding of, and aspirations for, the ENP role nationally across all geographical and clinical settings. That is, this Delphi Round 2 study is not about your individual ENP role in your local context; it is about ENP service generically.

The questionnaire is an electronic Word document designed for your convenience to complete, save, attach and return it in a reply email. We would appreciate your response **within two weeks of receiving this email**. If for any reason you cannot complete and return it within two weeks, please let me know.

It is assumed that all entry-level NPs have achieved the generic NP competencies. This research is aimed at developing specific ENP specialty Practice Standards and their defining elements. This research concentrates on ENP clinical practice, and the specialty practice standards do not include NP standards relating to generic professional and leadership standards.

When completing the questionnaire, please score your responses on the Likert scale next to the relevant Standards and Elements. There is also space to include comments to qualify your responses. Please use this comment section to explain your scoring if not in agreement with the statements. Please refer to the table below (repeated on the questionnaire) when completing your responses to the statements.

- | | |
|-----|----------------------------|
| 1 = | Strongly disagree |
| 2 = | Disagree |
| 3 = | Neither agree nor disagree |
| 4 = | Agree |
| 5 = | Strongly agree |

When you have completed the questionnaire, please attach it to an email addressed to j1.oconnell@qut.edu.au

Your responses will be de-identified. This research has been approved by the QUT Human Ethics Committee. If you have any questions or require any further information about the project, please contact:

Principal Researcher: Jane O'Connell:

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Assumptions about the Emergency Nurse Practitioner Role

- ENP practice incorporates
 - the CENA Practice Standards for the Emergency Nurse Specialist
 - the ANMC (Generic) Nurse Practitioner Competencies
- ENP practice may incorporate all/any presentations, all age groups and Australasian Triage Scale categories.
- ENP practice occurs across a variety of clinical settings in a variety of geographical locations where the principles of emergency care and advanced and extended nursing practice are fundamental.
- ENPs work autonomously and collaboratively; often with these elements overlapping and occurring simultaneously. ENPs work collaboratively in a coordinated team care approach and seek expert advice when necessary. Patient handover and referral occurs when required for optimal patient outcomes.
- The ENP uses evidenced-based research and existing evidence-based clinical tools and guidelines to support their individual clinical decisions.
The following ENP Practice Standards encompass the above fundamentals of practice.

The Emergency Nurse Practitioner

Modes of Practice competency framework

The emergency care environment is characterised by unpredictability and caters for all age groups and healthcare presentations. Timely, clinically effective and safe care are fundamental requirements for this clinical service. The emergency care patient population is diverse, erratic and undifferentiated. Management of critical incidents, disasters, life-threatening presentations and non-urgent care are all within the remit of emergency care.

The findings from the qualitative phase of the study show that the nurse practitioner (NP) working in an emergency care setting delivers care for any patient presentation across all age groups and clinical specialties. Drawing upon advanced knowledge and skills, the ENPs work at a high cognitive level by untangling data, engaging in complex problem-solving and reaching conclusions about the patients' needs in a time-critical, often autonomous, mode of practice. They are identified as a clinical resource and a senior clinician working collaboratively within the Multi-Disciplinary Team (MDT) to achieve optimal outcomes for all episodes of care.

Development of a competency framework for ENPs must be informed by these characteristics of the work context. The data from extensive ENP interviews consistently show that ENP work readiness is about preparing for a way or modality of practice rather than a repertoire of task-based skills. This is supported by the literature that claims that skill-based competencies are most often aimed at novice nurses and are based upon the acquisition and performance of technical skills. They tend to be prescriptive and are devised for observable actions. ENPs perform at an advanced level, demonstrating reasoning and insight; therefore, competencies for these expert nurses require incorporation of high-level cognition skills framed by their ability to provide and lead effective clinical care across the diverse Modes of Practice in the emergency care environment.

The ENP practice standards are structured around three emergency clinical modes of practice, namely Rapid, Focused and Disposition.

Practice Standards for Emergency Nurse Practitioners

1 =	Strongly disagree
2 =	Disagree
3 =	Neither agree nor disagree
4 =	Agree
5 =	Strongly agree

Rapid Mode of Practice

Rapid Mode is characterised by urgent attention. This traditionally relates to cases of high clinical urgency, such as ATS Category 1 or 2. However, Rapid Mode describes ENP practice across a range of different service models and includes immediate actions that respond to urgent presentations—both life-threatening and non-life-threatening. The practices that characterise the Rapid Mode relate to: i) bringing order to available information to assist in immediate evaluation, ii) problem-solving and, iii) addressing the urgent issue to achieve physiological stability.

Practice in this mode is often team-based but also requires autonomous practice in treating individual patients or groups of patients. As a modality of practice, the Rapid Mode is relevant to clinical urgency across all ATS categories.

<u>Practice Standard</u>	
Rapid Mode 1. Performs an initial <u>assessment</u> of the emergency care patient, rapidly identifying the nature and characteristics of urgent care needs. Comments:	1-----2-----3-----4-----5
Elements	
<ul style="list-style-type: none"> (A). Conducts/reviews the primary survey to prioritise urgent care needs. Comments:	1-----2-----3-----4-----5
<ul style="list-style-type: none"> (B). Performs rapid expert assessment by looking, listening, inspecting, auscultating and 	

<p>palpating appropriately for airway, breathing, circulation, disability & exposure (ABCDE).</p> <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> (C). Determines adequacy and effects of breathing by assessing vital signs, attentive to hypoventilation, tachypnoea, tachycardia and breath sounds and auscultation of chest and comprehends the significance of findings. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> (D). Assesses adequacy of circulatory status and oxygen saturation/perfusion. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> (E). Assesses neurological status in context of the presentation and current vital signs, recognising altered mental states, both chronic and acute, including patients with traumatic injury and suspected spinal injury. Assesses psychological status. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> (F). Where all life-threatening abnormalities have been corrected and the primary survey is stable, concentrates on rapid assessment of other urgent needs, such as the requirement for analgesia or immobilisation/reduction of fracture/dislocation or immediate wound management etc. in a timely manner. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<p><u>Practice Standard</u></p>	

<p>Rapid Mode 2. Determines the required urgent care <u>intervention(s)</u> related to airway, breathing, circulation, disability and exposure in the unstable patient and performs or facilitates the required urgent intervention in collaboration with the Multidisciplinary team (MDT).</p> <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
Elements	
<ul style="list-style-type: none"> (A). Ensures patency of patient's airway using positioning, suctioning and airway adjuncts such as Oropharyngeal/Nasopharyngeal airway, supraglottic airway or Endotracheal tube as appropriate. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> (B). Supports breathing with supplemental oxygen when required by an oxygen delivery device until restoration of adequate breathing pattern or provision of definitive mechanical ventilation for oxygenation and gas exchange. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> (C). Provides appropriate circulatory support via establishment of appropriate vascular access for fluid and drug administration. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> (D). Recognises and intervenes in life-threatening circulatory disorders due to cardiac and other conditions such as electrocution, hypothermia etc. and uses appropriate therapy such as defibrillation to correct life-threatening arrhythmias. 	<p>1-----2-----3-----4-----5</p>

Comments:	
<ul style="list-style-type: none"> (E). Orders appropriate medications for treatment of ABCDE abnormalities, such as adrenaline, intubation drugs and fluid resuscitation, and is knowledgeable in all possible routes of delivery of drugs/therapy. Comments:	1-----2-----3-----4-----5
<ul style="list-style-type: none"> (F). In cases of trauma/injury, where appropriate, clear patient's cervical spine using published evidence to support decisions. Comments:	1-----2-----3-----4-----5
<ul style="list-style-type: none"> (G). Facilitates/performs urgent diagnostic needs such as ABGs or trauma X-rays prior to a complete diagnostic work-up, prioritising clinical urgency, particularly when there are multiple issues. Comments:	1-----2-----3-----4-----5
<p style="text-align: center;"><u>Practice Standard</u></p> <p>Rapid Mode 3. Orders appropriate <u>diagnostic</u> investigations for the emergency care patient and interprets results.</p> Comments:	1-----2-----3-----4-----5
Elements	
<ul style="list-style-type: none"> (A). Judicious ordering of radiological investigations based upon clinical data and 	

<p>relevant evidence-based clinical guidelines/tools.</p> <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> • (B). Judicious ordering of pathology tests and investigations based upon analysis of assessment data, clinical relevancy and attention to current evidence-based guidelines and underlying science. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> • (C). Interprets investigative findings collaborating with the Multi-Disciplinary Team (MDT) where necessary. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<p style="text-align: center;"><u>Practice Standard</u></p> <p>Rapid Mode 4. <u>Prescribes</u>/facilitates appropriate pharmacological and non-pharmacological therapy for resuscitation and rapid care across all ATS categories.</p> <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<p style="text-align: center;"><u>Practice Standard</u></p> <p>Rapid Mode 5. <u>Reviews</u> interventions and diagnostics from Rapid Mode situations and evaluates findings for restitution while providing ongoing care.</p> <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<p>Elements</p>	

<ul style="list-style-type: none"> (A). Uses clinical assessment findings and baseline vital signs to determine the need for further Rapid interventions as patient's needs change. <p>Comments:</p>	1-----2-----3-----4-----5
<ul style="list-style-type: none"> (B). Interprets initial diagnostics to inform the need for further diagnostics or different interventions. <p>Comments:</p>	1-----2-----3-----4-----5
<ul style="list-style-type: none"> (C). Maintains vigilance over episode of care until Rapid care needs are appropriately addressed or care is handed over to other member(s) of the MDT. <p>Comments:</p>	1-----2-----3-----4-----5

Focused Mode of Practice

1 =	Strongly disagree
2 =	Disagree
3 =	Neither agree nor disagree
4 =	Agree
5 =	Strongly agree

Episodes of care by the ENP often commence in the Focused Mode, when the patient may not need rapid interventions and where the ENP most often works autonomously. If the patient has required a rapid intervention such as analgesia, the ENP returns to conduct a more detailed assessment. The Focused Mode of practice incorporates a complete assessment, deciphering presenting data and reaching a preliminary diagnosis in a systematic way. This mode of practice also incorporates the review of patients that have already had diagnostic and treatment interventions or whose clinical condition continues to evolve. Ongoing assessment of the patient and monitoring the consequences of treatment occur in this mode.

<p style="text-align: center;"><u>Practice Standard</u></p> <p>Focused Mode 1. Performs comprehensive head-to-toe <u>assessment</u>, incorporating all systems on any patient that requires such, taking into account presenting complaint, mechanism of injury and past medical history.</p> <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<p>Elements</p>	
<ul style="list-style-type: none"> (A). Conducts an extensive advanced physical examination (secondary survey) that incorporates each relevant body systems using a deep knowledge of anatomy, physiology and pathophysiology and the characteristics of the emergency care patient. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> B). Obtains and documents a comprehensive clinical history using appropriate clinical tools, data sources and communication strategies. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<p style="text-align: center;"><u>Practice Standard</u></p>	

Focused Mode 2. Determines and orders appropriate <u>investigations</u> based upon the focused assessment findings. Comments:	1-----2-----3-----4-----5
Elements	
<ul style="list-style-type: none"> (A). Engages in judicious ordering of relevant pathology or radiological investigations relevant to practice in the Focused Mode. Comments:	1-----2-----3-----4-----5
<ul style="list-style-type: none"> (B). Determines the need for additional diagnostics to support appropriate ongoing treatment; for example, further EUCs for patient with electrolyte imbalance. Comments:	1-----2-----3-----4-----5
<p style="text-align: center;"><u>Practice Standard</u></p> Focused Mode 3. Formulates a preliminary diagnosis including differential diagnoses. Comments:	1-----2-----3-----4-----5
<p style="text-align: center;"><u>Practice Standard</u></p> Focused Mode 4. Determines and orders/conducts appropriate <u>treatments</u> and procedures based upon the focused assessment findings. Comments:	1-----2-----3-----4-----5
Elements	

<ul style="list-style-type: none"> (A).Confidently performs interventions for soft-tissue injuries and wound management for patients in a timely and appropriate manner. <p>Comments:</p>	1-----2-----3-----4-----5
<ul style="list-style-type: none"> (B). Using extensive pharmacotherapeutic and pharmacokinetic knowledge. makes decisions about use of ongoing analgesia and medications. <p>Comments:</p>	1-----2-----3-----4-----5
<ul style="list-style-type: none"> (C). Facilitates or performs insertion/removal of intravascular devices, chest tubes, urinary catheters, feeding tubes or other assistive invasive devices. <p>Comments:</p>	1-----2-----3-----4-----5
<ul style="list-style-type: none"> (D). Determines a plan of care that is responsive to physiological data regarding the patient's capacity to eat, drink and mobilise safely. <p>Comments:</p>	1-----2-----3-----4-----5
<p style="text-align: center;"><u>Practice Standard</u></p> <p>Focused Mode 5. <u>Monitors</u> the response to administered therapy using all acquired data and any ongoing information such as diagnostic results and observations.</p> <p>Comments:</p>	1-----2-----3-----4-----5
Elements	
<ul style="list-style-type: none"> (A). Makes decisions about patient's clinical situation and analyses deviations in the patient's response to treatment or illness trajectory and adjusts clinical management 	1-----2-----3-----4-----5

<p>accordingly.</p> <p>Comments:</p>	
<ul style="list-style-type: none"> (B). Demonstrates scientific knowledge and diagnostic skill in review of diagnostic test results for emerging homeostasis and relevance to the patient's ongoing needs, including the need for consultation and referral. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> (C). Orders/facilitates ongoing therapies according to assessment findings, patient's needs and response to treatment. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>

1 =	Strongly disagree
2 =	Disagree
3 =	Neither agree nor disagree
4 =	Agree
5 =	Strongly agree

Disposition Mode of Practice

Disposition relates to the arrangements and actions to be taken regarding ongoing treatment and/or the completion of care for all ED patients. It encompasses discharge, referral, transfer or admission and represents the settlement of the ED episode of care. The ENP mode of practice for disposition incorporates analysis of clinical assessment findings and the individual patient requirements for ongoing treatment. This mode may also incorporate decisions on withdrawal or withholding treatment in collaboration with patient, family and members of the healthcare team.

Practice Standard	
<p>Disposition Mode 1. Collates assessment data that contribute to accurate conclusions regarding the ongoing needs and disposition of the emergency care patient.</p> <p>Comments:</p>	1-----2-----3-----4-----5
Elements	
<ul style="list-style-type: none"> (A). Facilitates discussion with the patient, the family and the MDT where appropriate regarding the conclusions reached regarding the safe disposition of the patient. <p>Comments:</p>	1-----2-----3-----4-----5
<ul style="list-style-type: none"> (B). Reviews assessment data to inform appropriate and safe disposition decisions, taking into account the patient's current condition and expected response to treatment. <p>Comments:</p>	1-----2-----3-----4-----5

<p style="text-align: center;"><u>Practice Standard</u></p> <p>Disposition Mode 2. Refers appropriately for ongoing safe and judicious care in collaboration with the MDT when necessary</p> <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<p>Elements</p>	
<ul style="list-style-type: none"> • (A). Effectively arranges for the discharge, referral, transfer or admission of the patient in accordance with best practice and patient/family consultation. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> • (B). Ensures relevant documentation for discharge, referral, transfer or admission is completed as appropriate for the patient. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<ul style="list-style-type: none"> • (C). Demonstrates comprehensive knowledge of patient's needs in developing and documenting clear management/follow-up plan that is understood by the patient and, where appropriate, the family. <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>
<p style="text-align: center;"><u>Practice Standard</u></p> <p>Disposition Mode 3. When care is withheld or withdrawn, the ENP works collegially as part of the MDT to support the patient, family and colleagues.</p> <p>Comments:</p>	<p>1-----2-----3-----4-----5</p>

These data are confidential and constitute work in progress for my PhD; please do not disclose this document to others.

Thank you for your participation. Please email your completed survey to j1.oconnell@qut.edu.au

NOTE: the comment sections in this document have been reduced in size for inclusion in this thesis

Appendix C: Emergency Nurse Practitioner Clinical Practice Standards

Emergency Nurse Practitioner Clinical Practice Standards
<p><u>Rapid Mode:</u></p> <p>Rapid Mode is characterised by urgent attention and includes immediate actions ranging from life-threatening, such as resuscitation, to non-life-threatening, such as ‘see and treat’ presentations. The practices that characterise the Rapid Mode relate to: i) bringing order to available information to assist in immediate evaluation, ii) problem-solving and, iii) addressing the urgent issue to achieve physiological stability and comfort.</p> <p>Practice in this mode is often team-based but also requires autonomous practice in treating individual patients or groups of patients. As a modality of practice, the Rapid Mode is relevant to clinical urgency across all ATS categories. The conceptual themes in this mode are: <i>sorting, troubleshooting and relieve and restore</i>.</p>
<p style="text-align: center;">Practice Standard</p> <p><i>Rapid Mode 1</i></p> <p><i>Performs an initial <u>assessment</u> of the emergency care patient, rapidly identifying the nature and characteristics of urgent care needs.</i></p> <p>Practice Activities</p> <p>(A). Conducts/reviews the primary survey to prioritise urgent care needs.</p> <p>(B). Performs rapid expert assessment by looking, listening, inspecting, auscultating and palpating appropriately for airway, breathing, circulation, disability & exposure (ABCDE).</p> <p>(C). Determines adequacy and effects of breathing by assessing vital signs, attentive to hypoventilation, tachypnoea, tachycardia and breath sounds and auscultation of chest and comprehends the significance of findings.</p> <p>(D). Assesses adequacy of circulatory status and oxygen saturation/perfusion.</p> <p>(E). Assesses neurological status in context of the presentation and current vital signs, recognising altered mental states, both chronic and acute, including patients with traumatic injury and suspected spinal injury. Assesses psychological status.</p> <p>(F). Where all life-threatening abnormalities have been corrected and the primary</p>

survey is stable, concentrates on rapid assessment of other urgent needs, such as the requirement for analgesia or immobilisation/reduction of fracture/dislocation or immediate wound management etc. in a timely manner.

Practice Standard

Rapid Mode 2

Determines the required urgent care intervention(s) related to airway, breathing, circulation, disability and exposure in the unstable patient and performs or facilitates the required urgent intervention in collaboration with the Multidisciplinary team.

Practice Activities

- (A). Ensures patency of patient's airway using positioning, suctioning and airway adjuncts such as Oropharyngeal/Nasopharyngeal airway, supraglottic airway or endotracheal tube as appropriate.
- (B). Supports breathing with supplemental oxygen when required by an oxygen delivery device until restoration of adequate breathing pattern or provision of definitive mechanical ventilation for oxygenation and gas exchange.
- (C). Provides appropriate circulatory support via establishment of appropriate vascular access for fluid and drug administration.
- (D). Recognises and intervenes in life-threatening circulatory disorders due to cardiac and other conditions such as electrocution, hypothermia etc. and uses appropriate therapy such as defibrillation to correct life-threatening arrhythmias.
- (E). Orders appropriate medications for treatment of ABCDE abnormalities, such as adrenaline, intubation drugs and fluid resuscitation and is knowledgeable in all possible routes of delivery of drugs/therapy.
- (F). In cases of trauma/injury, where appropriate, clear patient's cervical spine using published evidence to support decisions.
- (G). Facilitates/performs urgent diagnostic needs such as ABGs or trauma X-rays prior to a complete diagnostic work up, prioritising clinical urgency, particularly when there are multiple issues.

Practice Standard

Rapid Mode 3

Orders appropriate diagnostic investigations for the emergency care patient and interprets results.

Practice Activities

- (A). Judicious ordering of radiological investigations based upon clinical data

and relevant evidence-based clinical guidelines/tools.

(B). Judicious ordering of pathology tests and investigations based upon analysis of assessment data, clinical relevancy and attention to current evidence-based guidelines and underlying science.

(C). Interprets investigative findings, collaborating with the Multi-Disciplinary Team (MDT) where necessary.

Practice Standard

Rapid Mode 4

Prescribes/facilitates appropriate pharmacological and non-pharmacological therapy for resuscitation and rapid care across all ATS categories.

Practice Standard

Rapid Mode 5

Reviews interventions and diagnostics from Rapid Mode situations and evaluates findings for restitution while providing ongoing care.

Practice Activities

(A). Uses clinical assessment findings and baseline vital signs to determine the need for further Rapid interventions as patients' needs change.

(B). Interprets initial diagnostics to inform the need for further diagnostics or different interventions.

(C). Maintains vigilance over episode of care until Rapid care needs are appropriately addressed or care is handed over to other member(s) of the MDT.

Focused Mode:

Practice in the Focused Mode follows rapid interventions such as ordering/administering analgesia where the ENP will return to conduct a more detailed assessment with the patient. Initial and ongoing assessment of patients not requiring Rapid interventions and monitoring the consequences of treatment occur in this mode. The Focused Mode of practice incorporates a complete assessment, deciphering presenting data and reaching a preliminary diagnosis in a systematic way. This mode of practice also incorporates the review of patients who have already had diagnostic and treatment interventions or whose clinical condition continues to evolve. Ongoing assessment of the patient and monitoring the consequences of treatment occur in this mode. The conceptual themes in this mode are *unravelling the encounter, translation and monitor and maintain.*

<p style="text-align: center;">Practice Standard</p> <p><i>Focused Mode 1</i> <i>Performs a comprehensive head-to-toe <u>assessment</u>, incorporating all systems on any patient that requires such, taking into account presenting complaint, mechanism of injury and past medical history.</i></p> <p>Practice Activities</p> <p>(A). Conducts an extensive advanced physical examination (secondary survey) that incorporates each relevant body systems using a deep knowledge of anatomy, physiology and pathophysiology and the characteristics of the emergency care patient.</p> <p>(B). Obtains and documents a comprehensive clinical history using appropriate clinical tools, data sources and communication strategies.</p>
<p style="text-align: center;">Practice Standard</p> <p><i>Focused Mode 2</i> <i>Determines and orders appropriate <u>investigations</u> based upon the focused assessment findings.</i></p> <p>Practice Activities</p> <p>(A). Engages in judicious ordering of relevant pathology or radiological investigations relevant to practice in the Focused Mode.</p> <p>(B). Determines the need for additional diagnostics to support appropriate ongoing treatment; for example, further EUCs for a patient with electrolyte imbalance.</p>
<p style="text-align: center;">Practice Standard</p> <p><i>Focused Mode 3</i> <i>Formulates a preliminary <u>diagnosis</u>, including differential diagnoses.</i></p>
<p style="text-align: center;">Practice Standard</p> <p><i>Focused Mode 4</i> <i>Determines and orders/conducts appropriate <u>treatments</u> and procedures based upon the focused assessment findings.</i></p> <p>Practice Activities</p> <p>(A). Confidently performs interventions for soft-tissue injuries and wound management for patients in a time appropriate manner.</p> <p>(B). Using extensive pharmacotherapeutic and pharmacokinetic knowledge, makes decisions about use of ongoing analgesia and medications.</p> <p>(C). Facilitates or performs insertion/removal of intravascular devices, chest</p>

tubes, urinary catheters, feeding tubes or other assistive invasive devices.

(D). Determines a plan of care that is responsive to physiological data regarding the patient's capacity to eat, drink and mobilise safely.

Practice Standard

Focused Mode 5

Monitors the response to administered therapy using acquired data and any ongoing information such as diagnostic results and observations.

Practice Activities

(A). Makes decisions about patient's clinical situation and analyses deviations in the patients' response to treatment or illness trajectory and adjusts clinical management accordingly.

(B). Demonstrates scientific knowledge and diagnostic skill in review of diagnostic test results for emerging homeostasis and relevance to patient's ongoing needs including the need for consultation and referral.

(C). Orders/facilitates ongoing therapies according to assessment findings, patient needs and response to treatment.

Disposition Mode:

Disposition is the settlement of the ED episode of care including ongoing treatment and/or the completion of care. It encompasses discharge, referral, transfer, or admission. This mode may also incorporate decisions on withdrawal or withholding treatment in collaboration with patient, family and members of the healthcare team. The two conceptual themes of Disposition Mode of practice are *resolution* and *packaging the patient*.

Practice Standard

Disposition Mode 1

Collates assessment data that contributes to accurate conclusions regarding the ongoing needs and disposition of the emergency care patient.

Practice Activities

(A). Facilitates discussion with the patient, the family and the MDT where appropriate regarding the conclusions reached regarding the safe disposition of the patient.

(B). Reviews assessment data to inform appropriate and safe disposition decisions, taking into account the patients current condition and expected response to treatment.

Practice Standard

Disposition Mode 2

Refers appropriately for ongoing safe and judicious care in collaboration with the MDT when necessary.

Practice Activities


- (A). Effectively arranges for the discharge, referral, transfer or admission of the patient in accordance with best practice and patient/family consultation.
- (B). Ensures relevant documentation for discharge, referral, transfer or admission is completed as appropriate for the patient.
- (C). Demonstrates comprehensive knowledge of patient needs in developing and documenting clear management/follow-up plan that is understood by the patient and, where appropriate, the family.

Practice Standard

Disposition Mode 3

When care is withheld or withdrawn, the ENP works as part of the MDT to support the patient, family and colleagues.

Appendix D: Participant Information and Consent Form

 Queensland University of Technology Brisbane Australia	PARTICIPANT INFORMATION FOR QUT RESEARCH PROJECT Emergency Nurse Practitioner
An exploratory study for development of Emergency Nurse Practitioner specialist competency standards QUT Ethics Approval Number 1100001216	

RESEARCH TEAM

Principal Researcher: Jane O'Connell PhD Student QUT
Associate Researcher: Professor Glenn Gardner, Faculty of Health, School of Nursing, QUT

DESCRIPTION

This project is being undertaken as part of a PhD for Jane O'Connell.

The purpose of this project is to conduct an open ended individual interviews and a Delphi study to determine a requisite skill set and specialty clinical competencies for emergency Nurse Practitioner (ENP) students for entry to practice. This study will be conducted nationally as part of a PhD.

You are invited to participate in this project because you are an endorsed ENP and eligible to be involved in an expert working group to assist in reaching group consensus on appropriate clinical competencies.

PARTICIPATION

If you consent to participate you will be consenting to participate in one phase of the research. You will participate in only one phase of the research either a open ended individual interview or the Delphi study.

Your participation in this project is entirely voluntary. If you do agree to participate, you can withdraw from the project without comment or penalty. If you withdraw, on request any identifiable information already obtained from you will be destroyed. Your decision to participate, or not participate, will in no way impact upon your current or future relationship with QUT.

The interviews will be conducted at a time convenient to the participant, it may be necessary to conduct the interview by telephone if the participant is remotely removed from the researcher. In other circumstances the interviewer will come to you at a mutually convenient time. We anticipate that your involvement for the interview will take approximately 1 - 2 hours of your time. Your participation will involve audio recording of the interview.

Questions will include: *What do ENP students need to learn to enter practice as an Emergency Nurse Practitioner?*
What are the explicit clinical skills required for entry to practice as an Emergency Nurse Practitioner?
How can these be mapped against existing generic NP competencies?

Delphi Study

The second stage will be the iterative rounds to achieve consensus among the expert participants who will validate and work to gain consensus on the developed body of knowledge from the interview stage. These rounds will seek quantification of the findings from the interviews by rating them on a 5 point Likert scale. It is anticipated that 2 or 3 rounds conducted via email should be sufficient to achieve consensus. Each round response will require approximately 1 hour of your time.

EXPECTED BENEFITS

It is expected that this project will not benefit you directly. However, ultimately it will benefit nurse practitioners entering the workforce in emergency departments.

Should you choose to participate; the research team will provide you with out-of-pocket expenses that may be incurred in participation in an interview.

RISKS

There is minimal risk associated with your participation in this project.

PRIVACY AND CONFIDENTIALITY

All comments and responses will be treated confidentially and following transcription, anonymously. The names of individual persons are not required in any of the responses. The audio recordings of the open ended individual interviews will be destroyed after the contents have been transcribed and coded. All documentation will be de-identified.

CONSENT TO PARTICIPATE

We would like to ask you to sign a written consent form (enclosed) to confirm your agreement to participate.

QUESTIONS / FURTHER INFORMATION ABOUT THE PROJECT

If have any questions or require any further information about the project please contact one of the research team members below.

Prof Glenn Gardner

School of Nursing—Faculty of Health—QUT

Phone 07 3138 5487

Email ge.gardner@qut.edu.au

Jane O’Connell PhD student

Phone 07 3138 4350

Email j1.oconnell@qut.edu.au

CONCERNS / COMPLAINTS REGARDING THE CONDUCT OF THE PROJECT

QUT is committed to research integrity and the ethical conduct of research projects. However, if you do have any concerns or complaints about the ethical conduct of the project you may contact the QUT Research Ethics Unit on 07 3138 5123 or email ethicscontact@qut.edu.au. The QUT Research Ethics Unit is not connected with the research project and can facilitate a resolution to your concern in an impartial manner.

Thank you for helping with this research project. Please keep this sheet for your information.



Queensland University of Technology
Brisbane Australia

CONSENT FORM FOR QUT RESEARCH PROJECT

Emergency Nurse Practitioner

An exploratory study for development of Emergency Nurse Practitioner specialist competency standards

QUT Ethics Approval Number 1100001216

RESEARCH TEAM CONTACTS

Prof Glenn Gardner

School of Nursing—Faculty of Health—QUT

Phone 07 3138 5487

Email ge.gardner@qut.edu.au

Jane O'Connell PhD student

Phone 07 3138 4350

Email j1.oconnell@qut.edu.au

STATEMENT OF CONSENT –OPEN ENDED INDIVIDUAL INTERVIEW

By signing below, you are indicating that you:

- have read and understood the information document regarding this project
- have had any questions answered to your satisfaction
- understand that if you have any additional questions you can contact the research team
- understand that you are free to withdraw at any time, without comment or penalty
- understand that you will be consenting to participate in an individual interview and will participate in only this phase of the research
- understand that the project will include audio recording of the interview
- understand that you can contact the Research Ethics Unit on 07 3138 5123 or email ethicscontact@qut.edu.au if you have concerns about the ethical conduct of the project
- understand that non-identifiable data collected in this project may be used as comparative data in future projects
- agree to participate in the project

Name

Signature

Date

Please return this sheet to the investigator.

CONSENT FORM FOR QUT RESEARCH PROJECT

Emergency Nurse Practitioner

An exploratory study for development of Emergency Nurse Practitioner specialist competency standards

QUT Ethics Approval Number 1100001216

RESEARCH TEAM CONTACTS

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Jane O'Connell PhD student

Phone 07 3138 4350

Email j1.oconnell@qut.edu.au

STATEMENT OF CONSENT—DELPHI STUDY

By signing below, you are indicating that you:

- have read and understood the information document regarding this project
- have had any questions answered to your satisfaction
- understand that if you have any additional questions you can contact the research team
- understand that you are free to withdraw at any time, without comment or penalty
- understand that you will be consenting to participate in the Delphi study and will participate in only this phase of the research.
- understand that you can contact the Research Ethics Unit on 07 3138 5123 or email ethicscontact@qut.edu.au if you have concerns about the ethical conduct of the project
- understand that non-identifiable data collected in this project may be used as comparative data in future projects
- agree to participate in the project

Name

Signature

Date

Please return this sheet to the investigator.

Appendix E: Ethics Approval

Copy of Ethics Committee Approval email

From: QUT Research Ethics Unit
Sent: Monday, October 03, 2011 7:53:11 AM
To: Jane O'Connell; Glenn Gardner
Cc: Janette Lamb
Subject: Ethics Application Approval—1100001216

Auto forwarded by a Rule

Dear Mrs Jane O'Connell

Project Title:

An exploratory study for development of emergency nurse practitioner specialist competency standards

Approval Number: 1100001216
Clearance Until: 3/10/2014
Ethics Category: Human

This email is to advise that your application has been reviewed by the Chair, University Human Research Ethics Committee, and confirmed as meeting the requirements of the National Statement on Ethical Conduct in Human Research.

PLEASE NOTE:

Forward the Likert scale questionnaire to ethicscontact@qut.edu.au quoting your approval number when available.

While the data collection of your project has received ethical clearance, the decision to commence and authority to commence may be dependent on factors beyond the remit of the ethics review process. For example, your research may need ethics clearance from other organisations or permissions from other organisations to access staff. Therefore the proposed data collection should not commence until you have satisfied these requirements.

If you require a formal approval certificate, please respond via reply email and one will be issued.

Decisions related to low risk ethical review are subject to ratification at the next available Committee meeting. You will only be contacted again in relation to this matter if the Committee raises any additional questions or concerns.

This project has been awarded ethical clearance until 3/10/2014 and a progress report must be submitted for an active ethical clearance at least once every twelve months. Researchers who fail to submit an appropriate progress report may have their ethical clearance revoked and/or the ethical clearances of other projects suspended. When your project has been completed please advise us by email at your earliest convenience.

For information regarding the use of social media in research, please go to:
<http://www.research.qut.edu.au/ethics/humans/faqs/index.jsp>

For variations, please complete and submit an online variation form:
<http://www.research.qut.edu.au/ethics/forms/hum/var/variation.jsp>

Please do not hesitate to contact the unit if you have any queries.

Appendix F: Mapping of qualitative data to Modes of Practice

Mode of Practice - Rapid
Conceptual Theme - Sorting
Selected Narratives
<p><i>‘so we RAT(Rapid assessment team) patients, my role is I request blood tests for those patients that need them and in pain or some of that but I make sure that I check their blood results.’</i></p> <p><i>‘When I got to work yesterday morning I saw a lot of minor injury presentations, there was a whole group of 4s and 5s that were waiting and I got in and saw them. At about 10am there’s a review clinic that happens, patients that come back for review the next day so I saw those review patients. In the meantime the ED actually filled up as well. So there was a man with chest pain, another lady who came in who was a type 1 diabetic with dehydration—a bit shocked and other acute presentations that I needed to assess and sort out’.</i></p> <p><i>‘I can see any patient that’s appropriate to ED...you end up finding out that they’re septic from their pneumonia - because they presented with a cough, they’re triage category 3 - they’ve been waiting three hours, they haven’t been seen, they’re febrile, they’re tachycardic, they’re vomiting and they’ve got a consolidated pneumonia. Now clearly that patient’s not going home and so you end up seeing them, you end up talking with a staff specialist. In the end you end up speaking to the specialist.’</i></p> <p><i>‘But for the patients sitting in the waiting room, you’ll go and see them quickly, make sure everything is as it’s supposed to be and then get the process happening, get them referred, get their bloods, get x-rays and have everything written up- you’re trying to improve flow, improve patient care so they can get sorted.’</i></p>

'I come on at 12, I'll see and sieve patients that are appropriate for fast-track and the borderline ones—so then it becomes about patient selection and while my scope is quite broad, who and how I choose to pick up is really kind of dependent on whether I think they might be fast or not then I have to counterbalance that decision with what is equitable and what is fair and just for patients. It might not be that the patient is fast-track appropriate but if they've waited for four and a bit hours just to see someone and just because they don't fit the fast track box I almost think that makes it untenable and unethical for me not to see that patient, so I will then pick up those patients. Umm - so for instance it might be that there's 3 or 4 fast-track patients that might have waited maybe 10 minutes or 15 minutes but if there's an older patient with CCF who has also got calf pain and whether it's cellulitis or not and they're a (ATS) category 4 and they're stable and they've been waiting 3 and a half hours but they're 80, my experience is that they don't tend to be fast but they still get overlooked and that for me is inappropriate.'

Mode of Practice - Rapid

Conceptual Theme - Troubleshooting

Selected Narratives

'If I go into resus, I will look at a patient and I can trouble shoot, I can do a physical assessment and say, well, have you thought about this, have you thought about that?'

'I often get a phone call from triage saying can you come out here and have a look at this or do you think this one is OK for you or can you write this patient up for this because the wait inside is really long or they'll say, we've got a trauma coming can you please come and 'primary' that patient or can you just come and help - well a lot of the time you might have 15 patients waiting on trolleys to come into the department and those patients may be waiting an hour, an hour and a half, and

they'll say can you go and do assessments on those patients and fast-track them in terms of do a rapid assessment, organize some interventions, some analgesia and get their management started while they're waiting to come inside. So, bloods, analgesia, x-rays, if it's a patient that's got a past history of renal failure, I'll call renal and see if they'll come down to see the patient just to try and make it a bit more efficient, a bit more streamlined.'

'We had a patient come to the front desk, and they said 'oh he just needs a dressing on his neck' and I said are you sure he just needs a dressing and they were like 'yeh, yeh'. He was triaged as a (ATS) category 5 because 'he just needed a dressing'. The community nurse dropped him in because he'd run out of dressings and when I got him in and had a look he could barely speak, I got the surgeons down and he was straight to theatre. He had a cancer but he had Ludwig's angina, his throat was swollen, you know cellulitis, he ended up dying 2 days later. But he came to the window and said I just need a dressing and you could see there was something not right with him - and that's just from experience I think. So something as simple as they just need a dressing can turn into 2 hours later and a major admission.'

'...well, I was thinking why are they a (ATS) category 3? Do they need pain relief, do they need an x-ray so I'll go and see them and get things rolling. In the ED because NPs tend to be the fixed constant, the triage nurses will ring you or come and see you and say can you write an x-ray can you write up some analgesia.'

'I'll do a limited quick assessment; we get lots of chest pains. I might have 4 patients that I'm seeing at the same time but because we want chest pains to be seen within 10 minutes I might get an ECG that's thrown under my nose—can you have a look at this - is this OK?'

Mode of Practice—Rapid

Conceptual Theme—Relieve and Restore

Selected Narratives
<p><i>'It's more often in a support role in resus. If it's a (ATS category) 1 or sick 2 - often procedural support, transport support or knowledge support. It might be ordering drugs or just assisting with prescribing and management things or it might actually be doing the procedures.'</i></p> <p><i>... 'because we have people queued in the corridor—some of the nurses will come and ask me to write up, like pain relief in particular, which I won't do without seeing the patient ... I will always go and just say hello to the patient, really quickly assess them and see what their history is and then I'll write them up for analgesia.'</i></p> <p><i>'...so if there's a dislocated shoulder or something like that that's a higher priority, a priority 1 or 2 (ATS category), could be depending on their pain, or it could be an open fracture—we'll see them urgently.'</i></p>
Mode of practice - Focused
Conceptual Theme - Unravelling the encounter
Selected Narratives
<p><i>'I see patients as they present to the emergency department; I assess them and order any appropriate investigations; come up with a diagnosis, and discharge that patient with the appropriate treatment. And if I need to I will collaborate with one of my colleagues to ensure that the patient receives the best care and the best treatment and I haven't missed anything'</i></p> <p><i>'...getting a clear history, untangle it all, take out all the distracting stuff, document the history in some kind of reasonable fashion, work up your investigations, your impression, your diagnosis, your whatever else you want to do and then get them (the patient) to where they need to be'.</i></p>

‘...know how to do a head-to-toe physical examination and a good history with that, because for you to prescribe and for you to order diagnostics, then that’s the foundation for everything. So I might see someone who’s quite tachycardic and they’re elderly and they’ve got abdominal pain, there could be a myriad of things going on there but the tachycardia is pretty significant and you shouldn’t ignore it’

‘Because I think that when you’re taking a history, you’re finding out that they’re on oral hypoglycaemics so then you talk to them a bit about their diabetes and how that’s going. So even the patient that comes in with a cut finger, you’re asking them about their medications and their past history, so I think probably 80% of patients you’re doing a full history. If a patient comes in with cellulitis or a pharyngitis which is our bread and butter work, I’m taking a full history on them. If a patient comes in with cellulitis, you need to listen to their chests to see if they have a murmur before you ring ID and commence antibiotics, you do that for the simple garden variety cellulitis. So I do a full systems on lots of patients, simple inversion injury at netball, 18 year old girl, no past history doesn’t need a full systems.’

‘..you need to be competent with working with people that are time-critical; you need to be really good at your assessment skills, weeding out the wood from the trees; sort of honing right in, prioritising, working out the difference between normal and the abnormal; asking the right questions; I think you need to be really good at communicating and advocating for the patient in an ED setting’

Mode of practice - Focused

Conceptual Theme - Translation

Selected Narratives

‘I had a man that came in with an altered level of consciousness, who had a known seizure disorder, who had previously had multiple seizures and had a prolonged

postictal period. And it looked like it was going to be a postictal state that he was in, but he came in probably at a GCS of 8 but he was hemodynamically stable and I felt confident to manage him as a postictal because his condition was so stable. But then when he didn't wake up after an hour and a half—but the other thing was that the paramedics had given him some midazolam so I figured that it was reasonable to think this person was postictal with midazolam.'

'I just see the next available patient. I'll manage them with a reasonable degree of independence and autonomy or do it with the guidance of the FACEM (specialist doctor) in our area. I do the history, the assessment, think about what investigations I'd like to do and then discuss it with the FACEM and they'll either go, yeah, good job; or how about adding this; or did you think that. And then we'd go to the next step which is you do your investigations and then come up with a diagnosis and then a treatment or management plan.'

'...come up with a plan, come up with differentials, come up with a diagnosis, then interpret these X-rays.'

Mode of practice - Focused

Conceptual Theme - Monitor & Maintain

Selected Narratives

'I go back and review the patients and their response to treatment...particularly if I've ordered analgesia'

'I'll review them in terms of how they're progressing with their care'

'I do observations and eyeball them to see how they're going and if they don't look like they're doing well then I go and review them formally but generally speaking I try and get them comfortable or do the appropriate management for that condition and then come back and do a review in an hour or whenever is appropriate and then another formal review always before I discharge people home—always. Personally I always go and review someone, never ever send someone home without seeing them yourself or putting your hand on their tummy or something again...'

'Any bloods that I order I make sure I follow them up because we built that into our practice. Any diagnostics that I order, I follow them up to make sure that the low potassium gets replaced or the sodium. Every x-ray, every diagnostic I follow them up, to check outcomes and see that the bloods look OK'

Mode of practice - Disposition

Conceptual theme - Resolution

Selected Narratives

'we refer to specialist teams; we refer to clinics; obviously we diagnose the problem; we prescribe appropriate analgesia, antibiotics; write discharge letters; liaise with home nursing, the outside people that offer services; Hospital in the Home; liaise with GPs about patients that need follow-up with their GP; provide discharge letters; discharge advice; wound advice; care advice; and medical advice basically.'

'In emergency the range of patients and presentations are so vast that it's very difficult to be specific as to exactly what we do. Patients don't come in with nice neat

diagnosis, we have to discover that ‘

‘...we are often asked, can you take them on and do a secondary survey and discharge them?’

‘...if I see a kid that needs admission then I do the negotiation and referral for their admission.’

‘...they’re mostly minor injuries that require suturing or wound reviews or referral to specialist clinics or a simple admission.’

‘...organizing a discharge plan, making sure that the patient knows what it is that’s wrong with them, making sure that the patient knows when to follow up, what the follow up plan is, how and when to seek review and when to come back that’s really the most important thing. So I spend a lot of time with each patient, making sure that they’re aware of that and they know when to come back and when to follow up’.

Mode of Practice - Disposition

Conceptual Theme - Packaging the patient

Selected Narratives

‘I make sure they have their discharge plan in place, so they’ve got an analgesia regime or an antibiotic regime, they’ve either had their medications dispensed or I’ve written them a prescription. I normally write them a GP letter and we have

patient education leaflets so every patient that I see will get an information leaflet about their cellulitis or abdominal pain or whatever. Make sure they've got a follow up appointment arranged. Give them the opportunity to ask and answer any questions that they might have and just make sure that they're comfortable and aware of their plan and I make sure everything is written down because they won't remember when they've been unwell or had analgesia so normally I'll make sure everything is written down, that they've got a follow up appointment, normally 3 days to make sure the antibiotics have kicked in and they can go and see their GP for a follow up. Another rule that I always use is that you've got to make sure that you've closed the loop, so that they've always got someone else that they can go back to - to have a review so that if by chance I was to miss something or the patient didn't understand that they've always got another appointment to go to.'

'I get them admitted; I speak to the consultant and get them admitted - like the guy I had with back pain who ended up with cauda equina and needed an MRI; so I spoke to the neurosurgical registrar and got him admitted under the neurosurgeon and got him transferred for an MRI.'

'...every patient that I see I try and see to completion, almost all of my patients I will see to completion. There are occasions though where I'll hand it over and hand it on to someone else but whenever I tend to see a patient, I go in with the intention to see to completion.'

'...you can send them home with prescriptions for analgesia, and you've done your bloods, you got the follow up all organized, give them a trial at home and if they fail they come back.'

'All my patients that I see will get a letter of correspondence that will go to their GP. I make sure they have a letter to take with them and their x-rays if they've had a fracture and I'll make sure they have follow up care.'

'I am responsible for the assessment, treatment and referral of all the patients that present to my emergency department. A lot of my work is on education—patient education. Every patient needs an assessment and patients need documentation because of that and the majority of my work would involve patient education rather than prescription. Someone who comes in with a viral illness, there's heaps of counseling that goes on because it would be really easy to write a prescription for antibiotics and patients have an expectation, they feel that they're going to get antibiotics if they come in with a runny nose. It takes me longer to do the patient education on why they're not getting the antibiotics - the signs and symptoms and I provide them with a discharge piece of information that says 'these are the things that you need to come back for.' The rest of it would be patient education—why they're not getting antibiotics, kids with minor head injury—giving parents education on what to look out for, when to come back, oral rehydration solution, wound management—how to look after your stitches all that kind of stuff.'

Legend

RAT	Rapid Assessment Team
Resus	Resuscitation
ATS	Australasian Triage Scale
FACEM	Fellow of the Australasian College of Emergency Medicine
GCS	Glasgow Coma Score
GP	General Practitioner